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THE
AMERICAN
MEDICAL MONTHLY.

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CONDUCTED BY

HORACE GREEN, M. D., LL. D., Prof. of Theory and Practice of Medicine.

E. H. DAVIS, M. D., Professor of Materia Medica and Therapeutics.

B. FORDYCE BARKER, M. D., Professor of Midwifery

R. O. DOREMUS, M. D., Professor of Chemistry.

J. M. CARNOCHAN, M. D., Professor of Surgery.

E. R. PEASLEE, M. D., Professor of Anatomy.

E. H. PARKER, M. D., Professor of Physiology and Pathology.

EDWARD H. PARKER, M. D., Editor.

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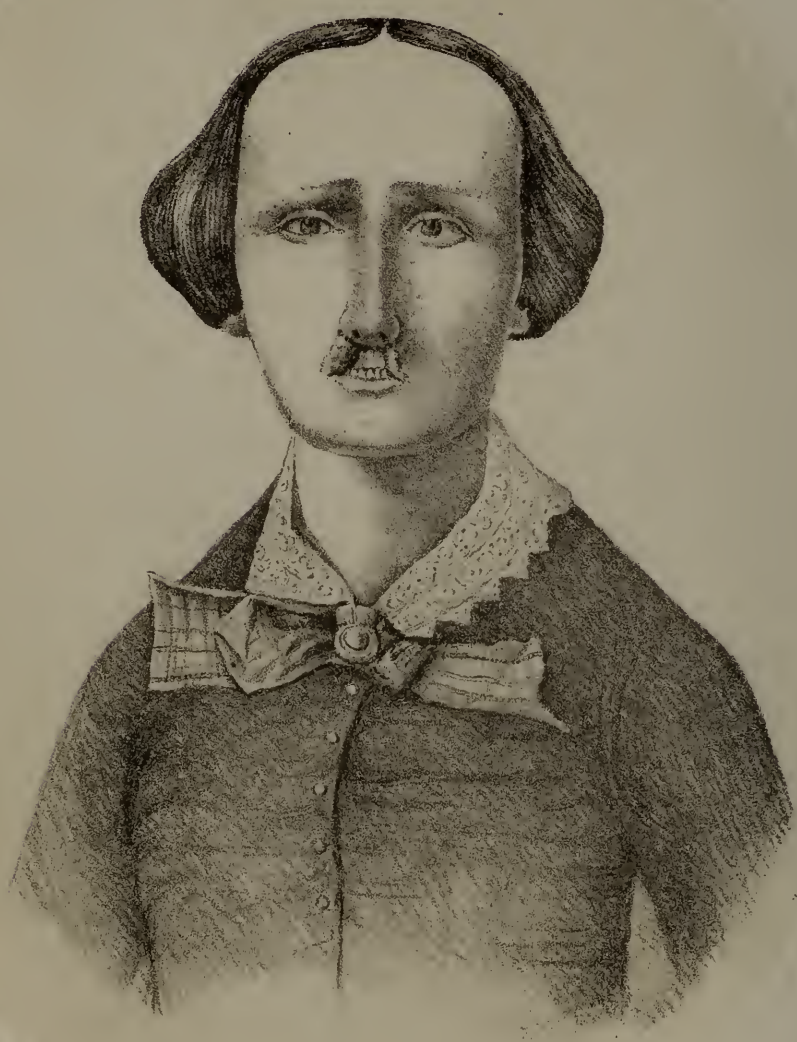
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OF CARNOCHAN'S CASE OF RESTORATION OF THE ENTIRE UPPER LIP.

APPEARANCE OF THE PATIENT BEFORE THE OPERATION.

Nº1.



APPEARANCE OF THE PATIENT AFTER THE OPERATION.

N^o 2.



The lines on the face shew the cicatrices resulting from the operation, as seen six weeks after.

THE AMERICAN MEDICAL MONTHLY.

JANUARY, 1854.

PART I.—ESSAYS, MONOGRAPHS, AND CASES.

Restoration of the entire Upper Lip. By J. M. CARNOCHAN, M.D., Professor of Surgery in the New-York Medical College, Chief Surgeon to the State Emigrants' Hospital, Ophthalmic Surgeon to the same Institution, &c. [with plates].

THE resources of operative surgery are more commonly demanded to remedy the ravages of disease upon the lower lip, than upon the upper. There are but few recorded instances of restoration of the entire upper lip, after destruction of its tissues, and the rules, so far, in regard to the best mode of operating in such cases, are indefinite for want of established results. Ledran, in a case of cancer of the whole of the upper lip, had no other resource, to mask the deformity after the operation, than to make the lower lip ascend to the base of the nose. I am not aware of any recorded case of restoration of the entire upper lip in this country. Lisfranc and the younger Bérard have related, each a successful case; and I record below another case, in which the attempt at making an entire upper lip was followed by complete success.

In each of these instances, the Celsian method was adopted; that is, after removal of the disease by angular incisions, lateral quadrilateral flaps are detached by dissection, and then brought together on the median line. The cheeks thus contribute to the formation of the new lip, the free edge of which is constituted by the bleeding edge of the lower horizontal incisions; while the upper horizontal incisions are united to the base of the nose.

The upper lip is usually the site of congenital deficiency of the face; but at times, its substance is destroyed by phagedenic ulcerations, or traumatic lesions.

The ulcerations of the lower lip are more apt to be of a purely cancerous character, malignant in their progress, accompanied by fetid discharges, leading to indurated swelling over and under the jaw, contaminating the contiguous tissues, as well as the neighboring glands, producing tedious hectic, and ultimately death.

The destructive lesions met with on the upper lip, are generally the result of chronic, phagedenic ulceration, which often begins in the form of lupus; but they may also result from accidental traumatic lesion. The constitution may be at fault, the strumous diathesis may be present, or some other latent cachexia may pervade the general economy. Assuming the characteristics of chronic, phagedenic ulceration, with jagged, irregular edges, and often with but little discharge, there is no disposition to contamination of the neighboring glands; but there is no limit to their destructive tendency, gnawing, as it were, the structures, soft and hard, in their slow but unrelenting progress, and causing the face to present, at last, the most hideous and appalling deformity.

Case.—In April last, I was consulted by a lady, Mrs. O. H., aged 39, the wife of a planter in North Carolina. Her parents had been persons of good constitution, and her brothers, of whom she had several, are free from any manifestation of cachectic diathesis. Although born in a favorable condition of life, this patient, according to her own account, early exhibited signs of strumous diathesis. As early as she can recollect, she was afflicted with pains in the limbs; and, at the age of ten, the glands became affected. Lumps of considerable size would frequently form about the throat and ears, and also a lump in her left breast, about an inch and a half in diameter. A small protuberance had made its appearance on the upper lip, which, to use her expression, was said to be a mother-mark. This pimple, or mark, gave no trouble until 1836, about her 22d year of age, when it assumed the character of a sore, with but little secretion for a time, but afterwards accompanied by an unhealthy, sanious discharge. The ulceration soon became about three quarters of an inch in diameter, and seemed disposed to progress rapidly on the surface of the lip. Alarmed at this extension of her malady, she consulted some physicians of eminence, who pronounced the disease cancerous, and recommended recourse to an operation. This proposition was assented to, and an operation was performed. The wound seemed to heal favorably, and the local disease was apparently cured. Her general health, however, remained feeble; and she proceeded to Philadelphia to consult Dr. Dewees, then a distinguished professor in the University of Pennsylvania. Under the care of this physician, her general health became much improved, and for some years she remained in good health, without recurrence of ulceration of the lip. In 1845, she had

an attack of malarious fever, during which the lip became tumefied, and ulceration, at the seat of the old sore, broke out again, with more malignancy than ever. The disease again assumed a chronic form, and, under the use of some alterative medicaments, remained stationary for nearly three years. In October, 1848, another exacerbation of the disease took place, attended with excruciating pain and a slight extension of the ulceration. These symptoms were again impeded by the use, as she supposes, of sarsaparilla, and some other unknown medicines. From this time the disease remained almost passive, until January, 1850; at which time, after the birth of an infant, the ulceration began to extend and to invade the entire thickness of the lip, destroying, in its progress, the entire substance of the lip in nearly its whole extent, from the free margin up to the base of the nose; on the right side, the ulceration also extended for more than half an inch, encroaching on the face along the side of the nose, detaching the ala of that side from the cheek, for nearly half an inch. The ulceration had again become passive, when the patient presented herself for my advice.

Her appearance, when first seen by me, was really deplorable. She was much emaciated, and her countenance wore the expression of intense mental suffering. The front teeth of the upper jaw were tolerably sound, but somewhat loose; the two canine teeth were partially, and the four incisors entirely, exposed; the gum, also, corresponding to the incisors, was exposed as far as the base of the nose, and was dry and purple for want of its natural covering. The ulcerative process had destroyed the entire thickness of the lip up to the base of the nose; on the right side, extending to the angle of the mouth; on the left side, to within one line of the angle of that side. The ulceration had also extended upwards on the right side of the face, beyond the level of the base of the nose, and had detached the lower portion of the ala. The edges of the ulceration were hard, thickened and irregular; in some parts dried up, in others presenting patches of angry aspect, apparently ready to take an acute ulcerative action upon the slightest exciting cause. There was no glandular enlargement at the base, or near the ramus of the lower jaw.

Viewing the condition of this patient, with such a dilapidated system, deteriorated, also, by perverted constitutional diathesis, I could not be but doubtful of the success of an operation which would have for its object, not only the removal of the diseased tissues, but the restoration of the entire substance and extent of the upper lip. The lady was remarkable for her intelligence, and I explained to her the probability of failure from the nature of her case, and the direful results which might ensue if the necessary incisions of such an operation did not unite. She replied that she wished me to perform the operation, if it were at all practicable, and that she would

abide the result with fortitude and resignation. Allowing her a few days to recover from the fatigue of the journey to the city, I assented to perform the operation on the following Thursday, 21st April.

Operation—The patient being seated on a chair somewhat elevated, and placed so as to be in a favorable light,—with a piece of fine carmine, pointed, I commenced by making dots on the face, in the line of the incisions intended to be made. The lower line ran in a direction from the angle of the mouth towards a point a little below the apex of the lobe of the ear; the upper extended from the base of the nose toward the centre of the anti-tragus; a slight curve, with the concavity looking upwards, being given to each line. One assistant supported the head, compressing at the same time the facial arteries; while another depressed the lower lip with a light curved spatula. Passing the forefinger of the left hand along the mucous surface of the cheek, as far as the anterior margin of the ramus of the jaw, and holding in the right hand a long, narrow, straight bistoury, I transfixed the entire substance of the left cheek on the lower line, at a point corresponding to the anterior margin of the masseter muscle. Carrying the bistoury towards the commissure of the mouth, the entire tissues of the cheek were now divided. Seizing the flap thus formed between the left forefinger and the thumb, and holding it upwards, the bistoury was carried freely along the line where the mucous membrane is reflected from the upper maxillary bone to the cheek, and made to separate the tissues upwards for some lines from their attachments to the superior maxilla. Still retaining the flap with the left forefinger and thumb, the bistoury was again passed through the substance of the cheek, on the upper line in front of the masseter, and carried forward so as to divide the cheek as far as the base of the nose. A quadrilateral flap was then formed of the tissues of the cheek, containing, in its substance, the orifice of the duct of Steno, which had been carefully avoided while the cuts were being made. The oral side, or edge, of this flap consisted of the indurated and ulcerating margin of the disease. With a pair of strong hare-lip scissors, this margin was removed, so as to leave a free, straight, and healthy margin.

Changing the bistoury to the left hand, a similar quadrilateral flap was then formed, in the same manner, on the right side, from the tissues of the cheek, and the diseased margin disposed of, so as to leave a healthy, straight edge, corresponding to the same edge of the opposite flap. The bistoury was next carried transversely across the base of the nose, so as to remove the diseased margin at that part, and, at the same time, to vivify the tissues in that direction.

There still remained that portion of the disease which required removal, extending, for about half an inch, along the right ala of the nose. This

was removed by incisions so fashioned as to form a triangle, and so as to leave healthy margins, free from any induration.

It now remained to bring together the various bleeding edges thus vivified, and to retain them together by the twisted suture. An assistant now pressed forward the quadrilateral flaps of each side, so as to bring in contact, on the median line, the vertical margins of the two flaps. Four suture pins, suitably placed, maintained the apposition in that direction. A pin on each side was now inserted, so as to regulate the transverse extent of the mouth, and to form the new commissures as near as possible in the site of the old. To unite the lips of the wound in the line of the lower horizontal incision, four pins were inserted on each side; and to effect the same end, along the line of the upper incision, four more pins on each side were inserted. Apposition of the bleeding surfaces across the base of the nose was effected by means of four points of interrupted suture; and three additional points of suture were used to bring together the edges of the triangular loss of substance along the ala of the nose.

The free border of the new lip, formed by the lower margin of the flaps of each side, united in the median line, still presented a bleeding surface. To obviate this, and to regulate the shape of the prolabium, the mucous membrane lining the new lip was drawn over the bleeding edge, and incorporated by four points of twisted suture with the tegumentary tissue.

During the operation, there was a considerable flow of blood; but this was easily arrested by the application of the sutures. The operation was performed in the presence of Dr. Williams, Dr. Horace Green, Mr. Maurice Peugnet, and several other medical gentlemen; and I was ably assisted by my friend, Dr. J. J. Crane, and by my colleague, Professor Barker, who administered small doses of chloroform during the different steps of the operation. *Vide* Plate No. 1.

Progress and Completion of Union.

Operation performed on Thursday, April 21st, 1853. Patient went on well until Friday, at midnight, when she complained of a good deal of pain in the right cheek and forehead. This was eased immediately by applications of Tinct. of Aconite. On Saturday, a slight puffiness of the right side was observed; this commenced at the root of the nose, and gradually extended until the upper portion of the cheek and eyelids were considerably swollen. Sunday—Patient comfortable, and swelling of right side considerably diminished. Monday, 4th day—Swelling almost entirely disappeared. Five pins removed this day from points where union seemed most complete. Three suture ligatures also removed; patient feels very well. Tuesday, 5th day—Favorable symptoms continue; eight pins removed, one of which is from the mesial line of union of the lip. Union has taken place

along all the incisions, except that at the base of the nose. Here, at the point where the interrupted sutures were used, there is suppuration for about one third of an inch. The points of suture at the angles of the mouth and at the lower part of the labial median incision, still allowed to remain, although there is adhesion at these places. The sutures along the prolabium removed. Patient complains of weariness from want of exercise, but feels perfectly well otherwise; pulse 98. 7th day—28th April—Removed seven more of the pins. Still leave in those at the angles of the mouth. Patient tolerably comfortable. Union at the angles of the nose has not taken place by adhesion; apparently the surfaces begin to granulate in a healthy manner. No fever; pulse somewhat irritable; continues to use fluid material for food. 8th day—Friday, April 29—Removed the pins at the angles of the mouth, and the two lower pins at the median line of union of the lip. Union perfect everywhere along the incisions, except at the base of the nose—slight adhesions here. Granulating process proceeding well. Patient much more comfortable to-day, than since the operation. April 30th—9th day—The parts along the base of the nose continue to granulate apparently healthy. A slight slough is evidently being thrown off along the median line of union of the lip, nearly as far as the free border, though not through the entire tissues of the new lip. The entire line of all the other incisions has firmly united. May 1st—10th day—Dressed the lip. The slough separates, and will probably leave the new lip entire. May 2d—11th day—Dressed the lip. The slough continues to separate; it is superficial, and leaves the lip entirely continuous. General health as good as usual. May 3d—12th day—The slough has separated and proves to be merely superficial. Granulation is proceeding well. Patient comfortable. May 4th—13th day—The lip where the slough separated is granulating finely, and new skin is beginning to appear; patient feels well. May 14th—23d day—Union complete, cicatrization perfect. New lip formed. Shortly after this date, the patient left New York for *her own home*, with the character of her face restored to its natural aspect, and in much better health and spirits than she had enjoyed for many years; feeling, as she remarked, as if she “inhabited another body.”—*Vid.* Plate No. 2.

PARACENTESIS THORACIS.

An analysis of twenty-five cases of Pleuritic Effusion, in which this operation was performed. By HENRY I. BOWDITCH, M. D., one of the Physicians of the Massachusetts General Hospital, and Member of the Societies for Medical Observation at Paris and Boston.

IN 1851 I presented to the Society, and subsequently published, some cases* in which Paracentesis Thoracis had been performed. I propose, in this paper, to continue the consideration of that subject. For this purpose, I shall present an analysis of my preceding paper, together with the records of sixteen more cases, in which I have operated or have seen others operate, since that publication. I shall give a tabular statement of some of the prominent features of the twenty-five cases which have fallen under my notice since April 17, 1850, with several inferences therefrom, and shall conclude with a brief account of a paper on the subject, published recently (Oct., 1853) in the *Archives Générales de Médecine*.

Analysis of my Previous Paper.

In the paper above alluded to, I briefly stated the facts relative to the history of the operation, and to the state of medical opinion on the subject. The operation, having been suggested by earlier writers, has never been used freely until since Laennec's discovery has enabled us to make our diagnosis more accurate than was possible without auscultation. Since 1843, Trousseau, Barby, Reybard, Schuh, Raciborski, and others, have performed it on the continent of Europe, while Messrs. Hughes and Cock, Hamilton Roe, &c., have operated in England. There has been, however, an unwillingness on the part of the great body of the profession, in Europe and this country, to look upon the operation with favor. My own experience had, however, led me, for many years, to think that some method should be devised for the *easy* and *safe* removal of fluid effused into the pleural cavity. I had seen patients die from simple effusion, I had seen others gradually fall in phthisis, or slowly recover, after perhaps years of misery, with a distorted trunk and shattered health. I asked the surgeon's best aid—by the scalpel. The result was very unsatisfactory. Finally, from Dr. Wyman, of Cambridge, I learned the use of the *small exploring trochar and canula*, as he had applied it a few weeks before, in the case of one of his patients. I saw, at a glance, the great value of his method. A full description of it may be found in my first paper. It is sufficient, for my present purpose, to say that a strong

* American Journal of Medical Sciences for April, 1852. Article on Paracentesis Thoracis, previously presented to the Boston Society for Medical Observation.

exploring trochar and canula have, in all the cases I shall present, been introduced, usually between the 9th and 11th ribs, and below the angle of the scapula. To this canula, by means of an air-tight apparatus, a strong suction pump has been attached, and the fluid has been drawn out, without the possibility of the introduction of air, *while the aperture that has been left has been so minute that no blood has flowed, and it has immediately closed* on the withdrawal of the instrument.

In that paper, I gave the details of eight cases. The *prominent* points of these cases may be seen in the tabular statement in this communication. The results to which I arrived, from my previous thought on the subject, and from the examination of the cases, may be best expressed by the following extract from the preface: "My own mind is decided upon the following propositions: I shall puncture the chest; *first*—whenever, either in an acute or chronic case, I find a pleural cavity *distended* or *filled* with fluid; *second*—whenever, in any *acute* case, remedies seem to have but little effect towards causing an absorption of the fluid, and after a fair trial has been made of them for two, three, or four weeks; *third*—I shall puncture in cases of larger effusion, complicated with organic disease, in the hope of relieving urgent dyspnœa or to lengthen life."

Upon these principles I have acted since they were laid down. The only change I should make in them, at the present time, with the experience of the results of twenty-nine punctures made in the sixteen new cases is this, viz. I would not wait so long as "three or four weeks" in acute attacks, provided I found that the effusion continued steadily to augment in spite of remedies. Moreover, if called in an acute case that has lasted a month, and in which there is an amount of fluid effused, sufficient to materially compress the lung, I shall advise a puncture, as the *first* step to be taken, previously to the use of the remedies commonly employed in pleuritic effusions. I trust that the result to which I have arrived from *seeing* the patients, may not be different from that to which the reader will arrive from the *perusal* of the following cases.

They are given in the chronological order of the operations, but they, with those in the preceding paper, may be classed in four main divisions, according to the effect of the operation:—

First Class, or those cases in which the operation has been the chief or sole cause of the cure of the pleuritic effusion. Cases* 1, 7, 8, 11, 12, 14, 15, 18, 20, 21 (total, 10), are of this class.

Second Class, or those cases in which the puncture has given more or less, and at times very great, temporary relief, so that some of the patients have asked for the operation a second, third, or fourth time, for the sole ob-

* See tabular statement.

ject of getting relief. Cases 2, 3, 4, 9, 10, 13, 16, 17, 19 (total, 9), are of this class.

Third Class, or those in which no relief was obtained, because no fluid could be removed. Cases 5, 6, and 25 (total, 3), are of this class.

Fourth Class, or those still under treatment, which are progressing favorably, with more or less rapidity. Cases 22, 23, 24 (total, 3), are of this class.

Cases.

Case 9th.—Mr. G., æt. about 20, clerk. I saw him with a physician of this city, Oct. 17th, 1851. During the winter of 1850–1, he had had some pulmonary trouble; but the patient assured me he had been well from that time until the actual attack for consultation upon which I had been called, and which proved to be one of very latent pleurisy of two or three weeks' standing. He had had no pain or dyspnœa, and only a slight cough, for ten days or more. He was able to be at work, but felt not quite well. On examination, I found signs of effusion into the chest. They had been recognised by the attending physician. I advised blisters and iodide of potassium. This treatment was continued until Nov. 6th, but with a gradual increase of all the symptoms. On that day, there was perfect flatness of the lower third of the right back, the sound changing by change of posture; a peculiar stomachic resonance above the line of flatness; ægophony; on succussion, some gurgling, but no metallic tinkling. The respiratory murmur was slight, even at the apex of the lung; but no râle was heard even on coughing. His general symptoms were improved. He was able to walk about, although some dyspnœa was evident. Pulse 100; skin comfortable, slight sweat at night. As the iodide had not been thoroughly tried, and as there was an indisposition to the puncturing of the chest, on the part of the attending physician, I advised 5 grs. 3 times daily, and blistering to be continued, and certainly not to allow a much longer time to elapse before doing the operation.

Nov. 22d. He was suddenly seized with pain in his other side, with great dyspnœa and anxiety. He had, however, obtained relief from a poultice and Dover's powder before I saw him. The auscultatory phenomena were as before, except that there was dulness to the second rib in front; there was no evidence of serious trouble in the left back, the murmur being heard pure everywhere, even to the base of the lung.

I urged a puncture; and on the 24th one was made, between the 9th and 10th ribs, below the angle of the scapula. Nine ounces of yellow serum flowed readily, and afterwards not a drop could be drawn, notwithstanding I passed a probe through the canula and found it perfectly pervious. Convinced that more fluid remained, I withdrew the instrument, and introduced it under the axilla, one or two ribs above; and eighteen ounces

more, of a similar fluid, came freely. The chest became somewhat resonant to the point of the puncture, and the ægophony was heard only at the lowest part. The patient suffered not at all, except that a cough came on which was rather troublesome. Dover's powder and absolute rest were ordered.

Dec. 2d. Had been improving; no returns of dyspnœa; patient felt brighter; he was able to lie on either side; pulse 108 to 112. On percussion, was really flat only in the lower two inches of the back. Respiration heard, vesicular though indistinct, along the vertebral column to near the base of the chest. Blister twice weekly, (3x3.)

Dec. 13th. Better in strength and appearance. His digestion was good. Pulse about 100, and occasionally a slight flush, P. M., and a little sweating at night. Respiration less labored than formerly. On inspection, the right side was evidently the larger. Murmur heard through the whole back, though indistinctly, to a line at the edge of the axilla; bronchial towards the base; absent on the side, under the axilla, and on the breast. No râle, but a metallic echo was heard on coughing. Good pulmonic sound, on percussion, on the back to where the bronchial respiration was heard. There it was *stomachic*; dull below the line of the nipple, front and side. As the patient was annoyed by the sound of liquid, and as he thought he had breathed less easily for a day or more, he desired to be operated on. I accordingly punctured, and drew off eighteen ounces of an *amber*-like fluid. After the operation, the bronchial respiration and the stomachic resonance were much lessened. Cough again supervened, as at the previous operation; the pulse was slightly accelerated, but the patient was not at all fatigued. Continue medicine. Tinct. of iodine to the side.

Jan. 14, 1853. The patient had continued without much change. He *felt* well—walked down stairs; was able to lie on either side. The pulse, however, was always accelerated—often 120. Auscultatory phenomena, however, revealed a similar state to last report. I drew off twenty-one ounces, more purulent.

Feb. 9th. A similar condition of the patient, except that he was rather improving; he had no hectic; he had gained flesh. I drew off again twenty-one ounces of a fluid still more purulent, and running but slowly.—Cod-liver oil. Ride out daily.

March 9th. Looked finely; able to walk out freely. Cough, very much less. Only slight dyspnœa. No gurgling heard since last operation. Dulness, much as before. Respiratory murmur heard further out on the side. I operated between the 5th and 6th ribs, and further forward, toward the nipple. Two pints of freely running fluid were removed. Patient was much more able to assist himself than after either of the previous operations. He had less cough, but a sense of stricture across the chest. Cod-liver oil and phosphate of lime ordered.

Two days after this operation the patient went into Boston to a convivial meeting, and after spending the day, drove out some miles. The weather was excessively cold, and he was very severely chilled. A febrile paroxysm supervened; and the pulse rose to 120, and a general feeling of distress, especially of limbs, was experienced. On the 17th there appeared what seemed to be a general inflammatory condition of the absorbents; small red lines were seen running along the legs and arms; quite tender to pressure. No trace of inflammation on trunk—and the point of puncture was perfectly healed. Patient had an anxious, sublivid look. The attending physician had used alcoholic lotions and 12 grs. of iodide of potassium. Meanwhile, the physical signs, though similar to what was noticed before, were rather more favorable.

He recovered from this acute attack in a few days, but he never was as well again; and, in about five or six weeks, signs of tubercular developments showed themselves in the diseased side—marked by crackling, and, subsequently, pectoriloquy at the apex.

Owing to illness, I did not see him afterwards; but in May, as there were signs of pointing, the attending physician opened with a lancet, and pus continued afterwards to flow, till he died suddenly, in the night of August 7, without warning, in consequence of copious hæmorrhage from the aperture. He had been, however, gradually declining for months. His physician writes, "Life had been despaired of from day to day; and, previously to the hæmorrhage, he had coughed very hard. The opening in the side did not become fistulous, in the true sense of that term, for it showed a disposition to heal from time to time, so as to render necessary the introduction of a tent. Injections of a watery solution of gum myrrh had been used every other day for some time before his death, whereby the patient was comforted, the discharge was lessened and made less offensive."

Reflections.—I had no doubt, when I was first called, that the case was one of *pleuritic effusion* of the most latent kind. But I feared, from the fact of even a trivial cough having existed before, that it was of a tubercular origin. I felt the importance of an early removal of the fluid; yet the small amount of it, and the slightness of the symptoms, connected with the fact that medical opinion was adverse to thoracentesis, prevented me from suggesting the operation at my first visit, Oct. 17. At my second, twenty days afterwards, I submitted the idea to the attending physician; but as the same reasons existed, the operation could not be performed, although the fluid had increased. Finally, the sudden attack of dyspnoea, on Nov. 22, a little more than six weeks from his attack, led all parties to feel that more active measures should be used. As I view the case now, in the broad light of ulterior experience, I think the delay was probably pernicious, possibly fatal; for, although in our present knowledge of the subject, we cannot be

sure that an early operation will prevent the tendency to tubercular development, the fact that whenever any amount of fluid is drawn off, the *rational* signs almost invariably improve, and the examples we have of the excellent results of an *early* operation in cases of pleurisy evidently tuberculous in their origin—these facts prove, almost conclusively to my own mind, that *it is better always to operate as early as possible in any case in which there is any considerable amount of fluid, especially in one of a tuberculous tendency.*

In regard to the other interesting points in this history, I would state that the patient always experienced so much relief from the operation, that he was sure to be the first to ask for its repetition. It may be remarked, also, that he had no alarming return of dyspnœa, subsequently to the first operation.

The last topic, specially suggested by this case, is the violent hæmorrhage, causing death. It will be remembered that this took place at least three months after the opening by the lancet, and six months from the last puncture. I have seen a similar case, under the care of another, in which exactly similar phenomena occurred, except that the case was one of pure empyema, punctured after months of illness, and again opened with the lancet when pointing. After the second opening, the patient improved very much, but a fistulous passage remained. From this occurred a hæmorrhage, which was repeated to an alarming degree a few days after. The patient was becoming anæmic. A surgeon was called, who enlarged the opening; could find no vessel, but a bleeding granulating surface. The aperture into the thorax being fully dilated, the patient had no more hæmorrhage, and slowly recovered. The question may be asked, if the puncture had any connection with this state of things. My own opinion is, that there is no proof of their connection. On the contrary, the facts as they stand are decidedly opposed to the idea of such a connection. I speak of it, however, in order that all circumstances may be known that seem, even remotely, to be favorable or otherwise to the operation, as urged in this paper.

Case 10th.—Mr. T., æt. 30, a rigger, I saw Feb. 17, 1852. It appeared that, for a year before, he had had cough; but that, during the summer, it had been slight, so that he kept at work until Dec. 18th, 1851. He then had sharp pains in the right side of the thorax, for which venesection was performed. He kept his bed, at that time, for a week; and then, feeling better, went out, daily, for a fortnight. He then became more ill, and he had been confined to the house for five or six weeks previously to my visit. Hectics for the same length of time. His appetite, from the first, had been poor, but his digestion good; tongue red, and with a slight coat; dyspnœa

always from Dec. 18th ; at times orthopnoea ; expectoration considerable, opaque. Pulse 124, skin warm and moist. His countenance was haggard and distressed ; he was sitting up, from inability to assume a recumbent posture. On percussion, flat below the third rib, front and behind—not clear above. Respiratory murmur obscure to third rib, indistinctly bronchial below, with a metallic tinkling on coughing or shaking. Behind, similar results, and ægophony. At the left apex, some rudeness of murmur. Right side of chest moved, during respiration, less than the left ; intercostal spaces *contracted*. Diagnosis—tubercles and pneumo-hydrothorax. I advised a puncture for *relief* to the suffering ; but as the patient was unwilling to submit, I ordered iodide of potassium, 3 grs. three times a day, and a blister every fifth day.

Feb. 27, i. e. ten days afterwards, much more dyspnoea—no relief. Patient then consented to the puncture. I made it in the usual space, between the eighth and ninth ribs, and drew out a little purulent fluid with much difficulty. I then punctured two ribs above, and two inches further forward, and removed $\frac{3}{4}$ xv. with very little pain and much relief to the distress of the patient.

March 3. For a day, the relief continued, but soon the dyspnoea began to return ; cough constant ; strength less. At my visit of that date, he had complete orthopnoea, and was in great agony. I told him I would do as he chose. I had little hope of giving, by any puncture, more than a temporary relief to his sufferings. From his previous experience, he requested me to operate. I punctured at the lowest point, and drew off $\frac{3}{4}$ iii. of a purulent fluid ; and on puncturing above, I procured *nothing*. The patient felt no uneasiness, except that after the operation, he, having lowered his arm, struck the canula, and caused much pain by its motion between the ribs. The next day, there was some redness and tenderness at the point, which subsided under a hop fomentation. The patient died on the 8th. No autopsy was allowed.

I present this case simply as a specimen of the relief obtained in a hopeless disease. This relief was more evident to the patient than appears from my record. The fact, however, that a request was made by himself for a second operation, is a proof of the little real suffering sustained, and the relief procured. The inflammation after the fourth puncture, though slight, was more than I ever noticed before ; and was, doubtless, owing to the striking of the canula while in the wound. Its rapid subsidence, however, especially when connected with the ordinary absence of all symptoms of the kind, is not unfavorable to the operation.

Case 11th.—Mr. R., æt. 59 ; “ An old soldier,” wounded at Waterloo ; in U. S. 23 years, where he had had numerous occupations, and had

indulged in free living. He was "well," till his disease began, for which he entered my service at the hospital. About five weeks before his entrance, he had had pain over the left crista ilii, and in a few days had hæmaturia, with dysuria. Appetite lessened; very costive; some slight dyspnœa; cough very seldom. Very little treatment previously to entrance. At his entrance, he could lie easiest on the right side; but he had been, however, able to lie on either. He sat up, and could talk, but with evident dyspnœa. Respiration, 17; pulse, 96; skin, normal; tongue, moist, with a thin white coat. On inspection, intercostal spaces filled in the lower half of the left chest. Percussion, flat all around the same side, below a line on a level with the second rib. Murmur scarcely perceptible throughout. Puerile at right, with slight, fine crepitus at the base. Ægophony over dull space. Heart beating to the right of the sternum. I ordered inf. sennæ comp. f. $\frac{3}{4}$ iii. with cathartic enema; broth for dinner; house diet at other meals.

Dec. 29, I punctured between the eighth and ninth ribs, behind, and drew off $\frac{3}{4}$ xxiii. of a yellow serum, with relief to a sense of fulness there, and with more ability to lie on the right side. Pulse, a short time after operation, was 98. Ordered iodide of potassium, gr. iii., three times daily, in syrup of sarsaparilla. Blister (3×3) to left side. He had an opiate given at night.

Dec. 30. Much lighter since operation; less cough, and not painful; urine much increased. Blister very troublesome.

He soon after left the ward, and consequently fell under the care of my colleague, Dr. Bigelow. His subsequent history is as follows. Sol. magnes. sulph. was given several times before the 11th of February. Afterwards he drank freely of cream of tartar. Under these remedies, his bowels were freely opened, so that, at one time, the cream of tartar was suspended.

Jan. 2 (four days after the operation), his chest was flat in the lower two-thirds of the back; bronchial respiration and ægophony there. Obscure respiration in the left breast.

Feb. 1. Friction sound at the lower part of the left breast. On 15th it was much stronger. But Feb. 1st, he had some cephalic symptoms; cephalalgia, scintillations, &c. Nausea and vomiting on 8th. Pulse quickened. On 18th, some wandering of mind. 21st, twitching of muscles, and insensibility. On 22d, he died comatose.

Feb. 24, autopsy by Dr. J. B. S. Jackson. The records of the chest are as follows, "Left pleura mostly quite free; strong old adhesions over apex only, and along the lower lobe near the spine. A few ounces of turbid, serous fluid only in the cavity; nothing like pus. A delicate film of false membrane was seen over most of the pleural surface, just enough to obscure its *polish* for the most part; in some parts $\frac{1}{3}$ or $\frac{1}{2}$ an inch thick, translucent, organizing. Left lung small, but more or less air everywhere in it. Consider-

able congestion; weight $\frac{3}{4}$ xiii., length 10 inches. Right lung, everywhere old pleural adhesions; lung itself healthy, but congested. Stomach, extensive cadaveric softening of mucous membrane of left extremity. Kidneys healthy, except for a simple serous cyst, the size of a nutmeg. Prostate generally enlarged. Lobe stands out directly into the bladder, size of a marble, and round. *Head* acute meningitis at base, not very extensive. Pia mater there, red, flabby, and rough, but no decided granulations. Convolutions flattened, and surface dryish. Lateral ventricles contained $\frac{3}{4}$ v. of serum, with softening of the surrounding substance."

Remarks.—The totally latent character of this attack; the prominent symptoms (hæmaturia, &c.), in fact, leading the physician to suspect nephritis rather than pleurisy; the easy diagnosis by means of the physical signs; all these are facts of importance.

As to the advantage derived from the operation, no one, I think, will doubt about it, who remembers the improvement in the rational and physical signs; and, above all, the appearances at the autopsy. A very little fluid was found in the pleura; the membrane was inflamed only in the slightest degree; the patient evidently had died of his acute meningitis, while recovering from his pleurisy, which recovery commenced with the time of the puncture of the chest.

Case 12th.—Mrs. S., æt. 21, I saw with a physician of Boston, Feb. 27, 1852. The antecedents of her actual condition were somewhat vaguely obtained, owing to the sufferings of the patient. It appeared, however, that she had had a cough during the autumn, and that, about six weeks before I was called in consultation, she had what was called pneumonia (? pleuropneumonia, or, more probably, pleurisy), with severe pain in the right side. From the more serious symptoms caused by this, she had recovered in about two weeks, and she was able to walk about, though she was weak. She soon became ill again, and with evident signs of pleuritic effusion. She had had hectic paroxysms. Menorrhagia she had been subject to till two months before, and since that, amenorrhœa. At our visit, she appeared in great suffering with dyspnœa, pain and discomfort in the side. Her previous night had been very bad. Her countenance was pallid and haggard; her pulse was 108.

The physical signs were, flatness over the whole of the right chest; strong tubular respiration to the third rib; with great vocal resonance. Ægophony at the back and side, below the middle of the scapula. Puerile respiration in the other lung. No râle anywhere. The right side of the chest was very prominent, and at one spot, it was very tender; and as it had given evidence of fluctuation, an escharotic had been applied some days

previously, but the eschar had not separated. The intercostal spaces were *more contracted* than usual.

I punctured at the usual spot (viz. below the angle of the scapula and between ninth and tenth ribs), i. e. about five or six inches from the spot that was pointing, and $\frac{3}{4}$ xli. of very thick pus were slowly drawn out, without any difficulty, save at one time a slight stricture across the chest. The prominence described above, subsided at least one-half, and some resonance was heard, on percussion, down to the line of the puncture. The cavernous voice in front, and the ægophony behind, were nearly gone; while the bronchial respiration in front was very much lessened. The whole aspect of the patient was wonderfully improved. She smiled, and felt much relieved. Pulse 96; hand cool, damp; asked for food. Ordered iodid. potass. \mathfrak{z} i., syrup sarsaparilla \mathfrak{z} iv., \mathfrak{z} i. three times daily. Eat meat, and drink ale cautiously.

29. Night very comfortable; much less oppression and soreness of chest; but the part cauterised had risen again, was puffy and crackled from air in it. Similar crackling felt in the cellular membrane above, on the parietes, as high as the second rib. On percussion, good resonance to the point punctured—dull below. Cavernous respiration and ægophony wholly gone; and in their place was a want of respiratory murmur in the back, and metallic tinkling in front.

March 3. Much better; appetite sharp; bowels costive; no night sweats; pulse 90; chest, less prominent; eschar removed. Physical signs as before, except more vesicular respiration to the angle of the scapula, and across a space of three inches broad from the vertebral column. Rochelle.

March 9. On 4th, the abscess broke where the eschar had been made, and discharged, after a violent cough, an immense quantity of pus, so that the mattress was thoroughly soaked. Relief was obtained, and the discharge continued until 8th; some cough; slight expectoration. Physical signs—crackling, whole of the front of the chest (evidently from the lung expanding). Metallic resonance gone. Percussion very much better behind, and the respiratory murmur was heard even out to the axilla. Continue treatment.

March 13. Steady improvement; digestion perfect; slept well; no fever; sat up an hour yesterday; I learned that a new discharge from the same point had occurred, copious, and that from that time it had been more or less constant. At the visit it ran freely; cough very light; able to lie on either side; pulse 110. Respiratory murmur a little more, but much as at previous visit. Slight ægophony, at the very base of the chest; side still motionless; some emphysema still, but less in front.

Subsequently I did not see her; she went into Maine in August, was feeble at the time. After a few weeks residence there, she returned to East

Boston in September, when the fistulous opening closed entirely. From that time she has gained perfect health. Now (Nov. 18, 1853) she feels better than for years before her illness. She has no cough, except occasionally on taking cold. She is a stout, able-bodied woman. Her side is but little altered in form. Through her clothing, the change is not perceptible; but the dressmakers perceive that the left side is the larger. The respiratory murmur is vesicular everywhere, but less throughout the right, especially in the lower part of the lower lobe, where it is scarcely perceptible.

Remarks.—The puncture in this case gave the most gratifying relief; and, although the pleura opened in a few days, the patient looks back upon the operation as having given her the first step towards recovery. She never suffered afterwards as she had suffered before. Could not relief have been obtained earlier? Undoubtedly, such might have been the fact; and the reason why the operation was not performed was the general unwillingness, at that time, on the part of the profession, to believe in the advantage to be derived from it. The same reason allows, at the present time, hundreds to be suffering from the same cause, in various parts of our country. May I hope that this paper will tend to the alleviation of their sufferings?

Case 13.—Mr. B——, aged 40, Irish laborer, I saw with Dr. E——, Dec. 30, 1852. Generally well; two years ago, some dysenteric symptoms for eight weeks. Well afterwards till July; then slight dry cough; on 14th, fell, and struck his left side upon some stones. He had pain in the side ever afterwards, and although he was able to be out of doors, he did but little hard work. Shortly after his fall, he was exposed in the night to a drenching rain, and was thoroughly wet. He had a bad chill, and the pain was much increased. He was then treated by a physician, and got better again; but about six weeks afterwards, while pushing a raft, he fell into the water, and was obliged to walk some miles with his wet clothes upon him. After that period he had done no work, but till within nine weeks he had occasionally gone out of doors. During these nine weeks, he had been confined to the house with a gradual aggravation of all his symptoms. During the three weeks preceding my visit, he had heard “a splashing” in the chest. His cough had been at times very hard. His expectoration had been slight, never bloody, generally white and frothy. He was unable to sleep on the right side, although he could lie a short time upon it. Tongue smooth; appetite poor; bowels well. He panted very much, and was in great distress. He was seated, moaning, on the bedside, with his head bent forward; respirations from 48 to 52 per minute; pulse, 96; skin of natural warmth; urine sufficient, and by report of patient was natural. Little motion of the left side of the thorax; on succussion and coughing there was a sound of fluid and of

air in the chest. The left chest was dull over a large space, dulness varying with the change of posture of the patient. Metallic echo heard in the breast on coughing; heart pushed strongly to the right of the sternum; lower part of the left chest rather prominent, quite tender, soft, but no evident pointing.

A puncture was made between the eighth and ninth ribs; great relief followed. In fourteen minutes I had drawn out $\text{℥} \text{lxiv}$ of a purulent fluid. Cough came on then as the sole unpleasant symptom during the operation. The heart fell back a little. Tincture of Iodine externally, and Iodide of Potassium internally, were ordered as in the other cases.

Jan. 3. His nights had been much easier; less cough. No moaning, and whole aspect much improved; appetite poor; pulse 96; had kept in bed all the time; urine as before operation; some tenderness, low down on the left back, but more particularly near the point of the puncture. The respiratory murmur seemed a little more evident at the apex of the lung. Otherwise, the signs remained as before the operation.

Jan. 10. The tenderness and peculiar prominence of the back had subsided; the respiratory murmur was heard indistinctly along the vertebræ, and some resonance to about an inch above the point of puncture; otherwise, physical signs as before; patient had become more feeble, and had had more dyspnoea for a few days, and lay, moaning, at my visit. Desired a second puncture as a relief, though he had no hope of a cure.

Jan. 11. I operated a second time, and in 46 minutes removed $\text{℥} \text{clxxv}$ of thick pus; previously to the operation, the left side was $2\frac{7}{8}$ inches larger than the right; afterwards it was only $1\frac{1}{8}$. Strong metallic tinkling was heard everywhere front and back. The operation was borne very well, and afforded vast relief; the patient sat up on the side of the bed, with much less dyspnoea, and chatted with his friends. He was advised to enter the hospital, but he died within forty-eight hours, having accidentally taken an overdose of opium. No autopsy was allowed.

Remarks.—Let it be remembered that this patient had been ill more than five months with a pleuritic effusion. When I saw him, he had orthopnoea, great emaciation, and all the marks of approaching death, unless relief were obtained. I conceived it right and best to operate, but I did so with little hope of doing permanent good. There was a *chance* of permanent relief, and almost positive certainty of temporary relief from agonizing distress, and by an operation, as I believed, perfectly innocuous. The results, as far as they went, were satisfactory. He obtained so much relief from the first puncture, that he eagerly sought for a second, when I drew off the largest quantity of fluid, and that likewise being pure pus, I had ever extracted, viz., about $5\frac{1}{2}$ quarts, which, added to the two quarts previously taken, made about $7\frac{1}{2}$ quarts in twelve days.

Case 14.—March 19, 1853. Saw with Dr. — of Roxbury, Mr. —, age 24, clerk. I learned that he had lost a brother and sister by phthisis; he had a cough seven years before, and slight hæmoptysis; he went to Cuba, and returned well, and had been in active work since, with only an occasional cough; two years ago he had a slight pain in the right side, and could not, for a time, easily straighten himself; a fortnight before I saw him he weighed 162 pounds, and felt in perfect health. On 8th, he went to his warehouse as usual, and, P. M., he had chills, a slight cough, and a very few sputa; he returned home, and did not leave the house afterwards. In two days a stricture came on in the chest, which gradually augmented from day to day; no marked fever; his sleep had gradually become more and more disturbed, and finally he was unable to lie on the left side; he sat up most of the day; his appetite was lessened. Dr. — had discovered, early in the disease, an insidious attack of pleurisy; and the effusion had rapidly progressed until the time of my visit, while the patient had been daily getting worse in his general symptoms. I found him sitting up, rather pale, and thin; no great dyspnoea, but some labored breathing while talking; pulse 120, small and irritable. The right side of the chest was larger than the left, and felt solid on percussion. Flat percussion, except at the very apex, behind; absence of respiration in the same space; slight crackling on cough, at the left; ægophony all over back, below the spine of the scapula. Diagnosis: very large effusion, probably tubercular.

On 20th I punctured in the usual place, and removed three pints of a yellow serum; severe stricture across chest, and coolness of surface, with weakness of pulse and debility supervened. Wine and water. Iodide Potassium grs. iij in infusion digitalis, three times daily. Series of blisters to the side.

22d. Much relief; had slept better, more appetite, urine augmented; looked better; stricture in chest gone, Pulse 96; could lie down easily on either side. Percussion clearer, even down to the point of puncture behind and to the third rib in front. Respiratory murmur heard indistinctly to the same parts. Less crackling at the apex. Ægophony gone, except in lower two or three inches. No inflammation about the point punctured.

From the time of the operation, the rational signs improved; so much so, that without the physical signs to guide us, we should have considered him as getting well quite fast. The treatment was continued. The physical signs however indicated that the lung did not readily expand in its entire mass. On April 30th, I reported the physical signs as follows:—Decided contraction of the right chest; scapula projecting. Resonance better to the base of the lung. Respiration heard all over chest, but obscure and occasionally with a click or rubbing sound. Bronchophony, which had been marked from the first at the right apex, was less. No râle there, even on coughing.

Nov. 12. To-day I saw this patient, he had been travelling and riding

on horseback, and using cod-liver oil during most of the summer. He had partially resumed business during the previous six weeks. He looked healthy; felt as well as he ever did in his life, except that he had dyspnœa on running up stairs, which subsided easily after rest. His digestion was better than for months before illness. He had no cough, nor any appearance of hectic. He had gained flesh. Once, he had an attack of asthmatic wheezing, a distinct paroxysm of asthma lasting about two days, during which, by the account of his physician, he had sonorous râles throughout the left or healthy lung. I ausculted him, and found some dulness on percussion of the lower half of the right back and under the axilla to nipple; less sound generally on that lung. Respiratory murmur almost null in the lower third, and obscure but healthy in upper parts. Voice scarcely heard at all in the lower third—not especially morbid anywhere. Left lung well. Patient regards the operation as the first step towards his present relief. He had been steadily growing worse until the puncture, and he has been as steadily, though slowly, growing better since. I presume that during life there will always remain some physical signs; for I presume that the lower part of the lung is in the condition described by Dr. Gairdner* of Edinburgh, as occurring after pleurisy, bronchitis, &c. The vesicles cannot and probably never will fully expand.

Case 15.—June 10th, 1853. Mrs. B——, I saw at E. Boston, with Dr. ———; æt. 45. She was the mother of a large family, which she had usually superintended until her illness; but she had been considered tuberculous, and for months had used cod-liver oil, under which, previously to her actual attack, she had been tolerably well. For three months before I saw her, she had felt not quite so well. Six weeks previously, she had had an acute pain in the right side; but it did not prevent her from going about the house. Three weeks before the operation, she went to church all day. While dressing for this purpose, she was surprised to find that her gown was too tight, and she had some dyspnœa. She, however, continued at work for a few days, when, owing to an increase of the symptoms, she was compelled to desist; she lost her appetite; the cough became dry and hard; the dyspnœa was extreme, so that at length she could not get up into her chamber, and fits of suffocation occurred, threatening death.

I found her with an anxious, very livid countenance, in bed, half erect, pulse 115. Respiration much labored. On percussion, the right side was flat everywhere, except at the apex behind. Respiration scarcely heard, even under the clavicle; bronchial for a small space along the vertebræ from top to bottom, absent elsewhere. Puerile through the whole of the left.

* British and Foreign Med. Chirurg. Rev., April 1853, Art. XI.

I punctured between the 8th and 9th ribs behind, and drew eighty-three and three-fourths ounces of yellow serum. The patient experienced the greatest possible relief, and suffered scarcely at all, except at the last of the operation she had some stricture across the chest and the cough was a little troublesome. The sounds on percussion *instantly* became more clear, to the point of puncture. The bronchial respiration was replaced by the vesicular. Crackling was heard throughout the right breast, evidently from the expanding lung. The pulse fell to 108, and she was able to lie on the left side, in a position which nearly suffocated her only twenty minutes before the operation. She was allowed broth and wine. During the next twenty-four hours, she coughed much and raised nearly a quart of frothy, white fluid.

I saw her, P. M., June 11, and found her quiet, with much more easy breathing; she was much less livid; she relished her broth and wine.

From this time, she steadily progressed, the lung expanded rapidly, as marked by râles that were heard everywhere in it. The little fluid that remained in the pleural cavity was soon absorbed; the urine was much increased. The œdema of the legs, that existed before the operation, was wholly gone by 20th (10 days after operation); the lividity of the skin had subsided. The appetite and digestive functions improved, and were excellent at the above date; no dyspnoea; pulse 84, quiet; little cough; only felt weak. On percussion (20th), 10th day from puncture, there was only a difference of pitch between the two sides—no real dulness. Vesicular murmur was heard in every part, only a little less at the right than at the left, with a dry crackle at the top on coughing.

Sept. 23. I found she had been going on well, though she was still feeble; scarcely any cough; digestion excellent; slight feeling as of pain or obstruction in the right side on full breath; was able to superintend her domestic affairs; she visited me at my office. On percussion, less sound at the *left* than the *right* top, and the voice was more resonant there; and I thought I heard, at times on coughing, a slight crackle there. Murmur obscure at the right apex. *Equal and clear in both lower lobes.* In other words, the signs were those of the chronic previous disease, the acute pleurisy having left little or no traces of its existence. Ordered to resume cod-liver oil.

This case I deem of especial importance:—1st. It indicates that a suspicion of tubercular disease of the lung must not prevent us from operating. This, with No. 7, proves the truth of this assertion. 2nd. I believe the operation saved human life. The patient was livid, and looked almost suffocating. Twenty minutes before the puncture she had, in fact, nearly expired. Twenty minutes after, she was like one restored to existence, and yet no operation of severity had been performed on her. 3d. The intensity of the cough was in exact proportion to the rapid unfolding

of the lung.* In 10 days, and probably before that, the lung was in contact, in every part, with the thoracic parietes. Surely, the operation did good service. Is there any possibility of a like result having occurred from the use of the common remedies? I think not.

Case 16.—Mr. H——, entered Mass. Gen. Hospital, May 28, 1853. Irishman, in U. S. 2 years. Sick three months only: he first noticed a cough, which came on after an exposure to wet and cold—no hæmoptysis. He was very ill at his entrance into the hospital, and continued to grow worse, with signs of disease in both cavities of the thorax. Flatness on percussion was observed in the lower part of both backs; the respiration was rude and bronchial at the left; mucous and sonorous râles everywhere. He was supposed to have pleurisy of both sides, and disease of the lungs, probably tuberculous. On 11th of July, the report by Dr. Storer was as follows: “Has been gradually failing during the last week; greater dyspnœa; at each visit bathed in cold sweat; countenance haggard, although he constantly reports himself as comfortable; pulse usually was 120.” On this day I operated, at the request of Dr. Storer, between the 9th and 10th ribs, and drew off twenty-three ounces of highly-colored serum. On the subsequent day the record was—“Comfortable day and night; respiration less labored; pulse 110; countenance more tranquil.” He continued improving until 17th, when the dyspnœa was augmented. He afterwards grew worse; and Aug. 5th, I punctured anew, and drew off thirteen ounces of colored serum. Little relief ensued, and he soon after left the hospital to die.

Reflections.—The peculiar nature of the fluid is the most interesting feature of this case. No. 3 presented the same fluid, and with similar result. I would draw the attention to the late date and the severity of the symptoms before the operation was allowed, but he obtained so much relief from the first operation that he gladly submitted to the second.

Case 17.—July 18, 1853. I operated on a young child, 6 or 7 years old, who had been operated upon several times by Dr. Wyman, of Cambridge, and who fell under my charge in the absence of Dr. W. in Europe. I removed twelve ounces of pus with ease, and with some relief to the patient. He has, however, died since.

Case 18.—July 18, 1853. Saw J. B——, with Dr. W——, of Jamaica Plains. Æt. 19. Clerk, from a city in one of the extreme Southern States.

* This fact fully sustains the view of Valleix, and as certainly is opposed to that held by Barth, upon the cause of the cough after thoracentesis. See, in Appendix, the analysis of an article on thoracentesis recently (Oct. 1853) published in the *Archives Générales de Médecine*.

It appeared that he had been ill from December, when he had "fever" and some cough, and obscure symptoms. From these he slowly recovered in two months, and resumed his work. He, however, was never wholly well, and in the spring he came north to recruit. At New York, he was seized with what was called "fever," and was ill a few days. Finally, four weeks before I saw him, he arrived at Roxbury. He was then not well, but he was able to walk about. On the evening of July 4th, he was exposed upon the Common, while viewing the fire-works. From that moment, he became rapidly worse, with debility, emaciation, total loss of appetite, febrile paroxysms every P.M., a very slight, scarcely noticeable cough; no expectoration; no evident dyspnoea, even on going up stairs. He could lie as well on one side as the other, and move rapidly from one to the other, without the least apparent difficulty of respiration.

At my visit, I found him a frail-looking youth, evidently much emaciated; he was reclining on a sofa, and without any marked symptom. His breathing, during conversation, was only a very little labored. His pulse, usually about 80, was rapid, apparently from emotion of mind. Only two days before, auscultation had been performed, and flatness of the whole of the right side of the chest, even to the apex, was found. There was bronchial respiration in the breast, and absence of murmur elsewhere. No ægophony. Fulness and want of motion of the intercostal spaces.

July 19th. I punctured in the usual spot. More than eighty ounces of yellow serum were drawn off, without the least trouble to patient. From this moment may be dated the commencement of the perfect cure of the disease from which he had suffered so many months.

On 20th I found him in every respect better—stronger, appetite better; less fever; sleep easier; respiration not heard outside of the axilla, but heard indistinctly along the vertebræ to the base of the back. Friction sound to 4th rib in front. Iodide of potassium internally, and iodine tincture externally, were used as in the previous cases.

26th. Murmur pure to nipple; obscure in the lower half, and generally in the back. All general symptoms better. Countenance much improved.

30th. He had ridden out freely, and had gained strength daily; had eaten full diet, and his digestion had been excellent; had gained flesh. Rubbing sound heard on the back, down to the point of puncture. Percussion equal in both backs, to the same point.

August 15. Fat and rosy, able to walk, ride, and eat as he pleases. He felt well, better than since his first attack in December. Murmur heard to the base of the right lung, without râle or friction sound. Percussion nearly like other side. Continue remedies.

Aug. 26. Saw him at my room. Weighed more than is usual, when

in health. All rational and physical signs improved. Only the slightest difference perceptible, on auscultation, between the two lungs.

Reflections.—Surely nothing can be more significant of cause and effect than the immediate commencement of recovery from long illness, after the operation. The record gives but a faint idea of the sudden, elastic bound with which every function of the body leaped into healthy action, the moment the incubus, which had been for months depressing them, was removed. On the following day the appetite was keen, the strength augmented; the urine, scanty before, flowed freely; the nights became easier; and the mental condition, as evinced by his countenance, showed that a great load had been removed.

The case is deeply interesting in other respects. The length of time it had continued latent was thoroughly peculiar. I do not believe, however, that he had had as much fluid as I removed, ever since his first attack in December, that is, for six months. Probably it had accumulated gradually at New Orleans, Staten Island, and Boston. I have never seen a case in which so much fluid existed with so little dyspnoea. A moment before the operation I made the patient turn rapidly from side to side on his couch, which he did without the least apparent dyspnoea. Not a single untoward symptom arose after the puncture, but everything tended towards restored health. On the 11th day he rode out, had gained flesh, &c. On 27th, he was, as he thought, in perfect health, and the respiratory murmur was heard to the base of the lung, while percussion gave almost equal results in both backs,—and this, too, after months of illness.

Case 19.—July 30, 1853. Mrs. L., I saw at Weymouth, in consultation. *Æt.* 20. Two years before, she had been married, and had been nursing till a few months previous to my visit. Her strength had been much prostrated. A cough, with pain in the right side of the chest, came on in February, but she thought little of it. The pain having subsided under a blister, she kept at her household employments, though not entirely well.—Gradually, however, the nursing and the local trouble overcame her, and she had been obliged to give up nursing, and to be confined to her house for three months, with evident disease of the same side. The debility had become greater, and she had taken to her bed. The symptoms were pains, never very severe, in the right side; no, or but very slight, expectoration, never hæmoptysis. Coughed less for two weeks before my visit than two weeks previous; but the cough was severe if she lay on her left side. Her appetite had been almost wholly gone for months. Urine normal in quantity and color. Occasionally, she had had a chill, but no marked hectic.

I found her lying in bed, emaciated to the last degree, and evidently approaching her end, unless some relief could be obtained. The right side

of the chest was dull to the 2d rib; flat from there downwards in front, and throughout the whole of the back; no motion of that side; general prominence of it. Obscure bronchial respiration was heard generally throughout the lung, with an indistinct broncho-ægophony; no râle, even on coughing. The other lung had puerile respiration throughout.

I advised an operation, as a means of temporary relief, at least. Accordingly, I punctured in the usual spot, and drew off ten ounces of yellow serum, which coagulated on standing. Suddenly, she complained of faintness and great stricture across the chest; she was paler, and evidently much distressed. On the removal of the canula, and putting her upon the bed, all unpleasant symptoms left her. No apparent change in the physical signs.

I advised a tonic course, and a repetition of the operation, if sufficient relief were obtained from that just finished. She passed a comfortable night, and afterwards she was able to lie with ease on her left side, which she had been unable to do for months before. The next day, by report of her physician, the dyspnoea was less. The fluid taken from the chest was nearly all coagulated.

In a few days the swelling of the legs, which had previously subsided after the operation, returned; and, with it, the cough became more urgent, attended with an increase of many of her other symptoms. The patient requested that I should be asked to operate again. Accordingly, on Aug. 3 (five days from her former operation), I examined her anew. The tubular respiration was extreme, and perfectly cavernous throughout the affected side. In truth, it was so marked that I should have hesitated upon the propriety of puncturing, for fear of piercing a solidified or excavated lung. The fact of having found fluid previously, induced me to puncture again. I did so, the patient being in a horizontal position. I could not remove but four ounces of fluid. Some air rushed into the cavity as I was probing the canula. No apparent effect, either then or subsequently, was produced thereby. The patient bore the operation well, fell into a quiet sleep afterwards, and her cough, from that time, ceased to be troublesome. No unpleasant effects followed the puncture; but the patient gradually grew feebler, and died Aug. 13, i. e. on the tenth day from the last operation.

Autopsy hurriedly made at 4, P. M., the same day. A quart of fluid was found in the right pleura, about a pint in the left. The left lung was free and healthy, except one small dot of tubercular disease. The right lung stood out from the vertebræ, solid and firm to the last degree. It was universally tuberculous. The upper lobe consisted of one large, solid, tubercular mass. The pleura was opaque with lymph, and at its upper part was adherent.

Remarks.—The strong cavernous or bronchial respiration, in connection with a fluid, and condensed lung, is an interesting fact, and corresponding

very exactly with observations recently made in Paris. In regard to the advantage of the operation in the case, I have merely to say, that if I were to have a similar case, I should advise the same course. The relief which the patient obtained after the first puncture, in being able to lie easily on the left side, and the total cessation of the severity of the cough, after the second; the fact that the patient begged to have a second operation, because of the relief afforded by the first,—all these convince me of the importance of the operation as a means of *relief*.

Case 20.—August 30, 1853.—Miss ———, of Maine, I saw in Boston. *Æt.* 23. She had never been very strong, but never seriously ill till present illness; always liable to cough on taking cold, *i.e.* when having coryza. In August, 1852, she had hoarseness, lasting for months and growing worse until December, at which time her strength was very much reduced and she had night sweats. She had slight cough ever after. Never pain in the chest; no tickling or trouble in the throat. Her expectoration had been, at times copious, frothy, and generally white; once she had hæmoptysis, perhaps an ounce, after walking. During February, she was quite ill, and went rarely out of the house. After the 1st of March, she began to ride, and improved rapidly. She also used the cold-water sheet daily. About the 1st of June, after “taking the sheet” more thoroughly than usual, she was seized with a chill and a fever, and a bad cough with great soreness of the chest and shoulder, and orthopnoea. As these symptoms subsided, the cough which she had had before subsided, and she again gained very rapidly. From this attack she had continued somewhat to improve under cod-liver oil, but the left side had always been a little more “sensitive” than the other.

I found her rather thin, but unusually bright and active. She had no apparent dyspnoea, save on exertion, especially after walking up stairs; then it was manifest, though she complained of it but little. She had no hard accesses of cough, but a frequent sense of irritation about the chest, provoking a cough. No expectoration; always some irregular action of the heart, with fluttering at the pit of the stomach, until within the three weeks previous to my seeing her. Tongue, clean; digestion, good. The urine, in June was, for two or three weeks, dark colored and small in quantity; of late, perfectly normal.

On percussion, less sound through the whole of left back than the right; quite flat towards the base. Line of dulness varied with change of posture. No râle, except perhaps, on coughing, at the top of the left lung and just below the angle of the scapula. The respiration was heard in the left breast, but below and under the axilla and in the back it was indistinct.

Ægophony in the lower half of the back. Left side more rounded than the right. The heart beat to the right of the sternum.

P.M. I punctured, and drew off eighteen ounces of a yellow serum, which was all that could be extracted, notwithstanding the patient was placed in various positions. She was nauseated, and vomited her dinner. There was little cough, and her pulse was small and regular, at 80. The heart fell somewhat towards its normal position. The patient stated that she felt as if she needed support, and as if she had "lost half of her side." Treatment as in previous cases, with nourishing diet.

August 31. (i.e. 24 hours after the operation),—could go up and down stairs with much less dyspnœa. The heart was no longer dislocated. There was crackling throughout the lung, even to the base. The night had been rather restless; she could not lie on the left side, owing to a pain in it when so doing; no fever or other trouble; her pulse was 92; she was sitting up and looking finely; her cough was more, but no expectoration.

From this time till September 10th (11 days after the operation), she continued improving. On that day, I noted as follows:—Much stronger; cough only of the most trivial character; some dyspnœa still (but less than before) on walking fast, &c., had walked, however, a mile or more without fatigue. Percussion gave *nearly equally good results in both backs*; but under the axilla and around to the front, near the cardiac region, it was dull. The respiratory murmur was heard throughout the left back, but where there was dulness on percussion the murmur was indistinct, with a crackling on full breath.

September 21. No cough or scarcely any for the past week. Her strength was less and her appetite was not quite so good; some dyspnœa on exertion, but she would be disposed to exert herself much more than her friends deemed prudent. She soon after returned home. I advised her to use the cod-liver oil, and to ride out daily.

October 30. I learned by letter as follows:—"I have been very well since I left Boston, I have had no cough or cold, I am, however, slightly hoarse most of the day." She states, that some dyspnœa remains on walking fast. She had gained a great deal of flesh and strength, so that she could endure much fatigue. I learned from a friend, that our patient seemed to those about her, nearly if not quite well. From the physician in attendance, it appears that the dyspnœa of late has been augmenting.

Remarks.—I regard this case as one probably tuberculous. The attack of pleurisy for which I operated came on in June, the patient having had cough for months before. Phthisis, I think, will probably be the result, but the pleuritic effusion was relieved, as in cases 7 and 15, as evinced by the lung expanding immediately. If the effusion should return, I see no objection to a repetition of the puncture. The chief points of

interest however, are the immediate expansion of the lungs and the sudden improvement in the health, even if it be destined eventually to fail.

Case 21.—Aug. 18, 1853, Mr. —, æt. 42, generally in active business; and for a time before being taken ill he had been very much occupied, and had been perhaps less strong than usual; for many years he had had some trouble in the right knee; three weeks before he called on me, a cough had commenced which had continued; expectoration slight, in the morning, white; two or three times he had been awakened by pain in his right side; on arising he had at times some dyspnœa, but generally he had attended to his business with comparative ease, although satisfied that he was not wholly well; he was able to lie on either side; he could go up stairs without much dyspnœa; digestion perfect; appetite excellent; some loss of flesh; he had consulted one or two physicians, who had advised trifling external applications which gave no relief; no one had ausculted him.

When he called on me, his countenance was not unhealthy, although his face was rather thin; he walked readily to my room, and seemed to have no dyspnœa; his pulse was 80, and regular; his skin was normal; his tongue was clean. The rational signs denoted nothing of importance; no hereditary predisposition to pulmonary disease. On percussion, there was flatness in the lower two inches of the right back, dulness varying with change of posture. Murmur heard to the bottom, but less than at the other side; no ægophony. Iodide Potassium gr.ii., three times daily, and Tinct. Iodine externally. He was told to use a chiefly vegetable diet, and avoid all undue exposure and over-exertion.

Aug. 20. Less cough, and less oppression; no pain in the right side for three days, though occasionally he had some in the left breast. No fever; and he looked wholly well. On percussion, less dulness at the right back; rubbing sound in *left* breast, and a fine crepitation along cartilages of *left* ribs. Iodine had produced a full effect. Apply it to both breasts.

Sept. 2. General aspect and symptoms same, but the physical signs prove an increased effusion; more dulness, with ægophony, in the right; crepitus less at the left.

Sept. 7. Finding still an increase of the effusion, so as to affect the lower half of the right chest, and that the patient was evidently losing ground, having less strength and much dyspnœa on exertion, I suggested an operation.

This was attempted on the 7th, but, owing to an imperfection of the instrument, no fluid could be drawn out. The patient suffered only momentarily from the puncture. On 8th, I drew off fifty-four ounces of yellow serum, rapidly coagulating. The patient was a little faint after it. Crackling appeared in the compressed lung. In a few minutes after the opera-

tion he felt as he "did before his illness;" that is, all sense of oppression was gone. One half an hour after the operation, the urine, having been dark and small from the first of his illness, suddenly increased to double the usual quantity, and became thin and pale. Pulse 92, a little hard. Ordered to keep quiet, and take bread and tea for food.

Sept. 10. A bed from weakness, but nights much easier; no dyspnoea; little or no cough. By auscultation it appeared that the lungs had expanded to a level with the point of puncture. Dulness on percussion, and ægophony below, but less marked. Resumed Tincture of Iodine externally. From this time the steady improvement continued.

Sept. 12. (Fourth day after the puncture). There was crackling to the base of the lungs, and the ægophony was nearly gone. Pulse 80. Tongue and digestion excellent. Strength improving. Ale at dinner.

Sept. 14. (6th day from operation). No cough, fever, or dyspnoea. Only trouble was weakness. Urine natural the last few days. On full breath, a fine, crepitous râle to the point of puncture. Voice only a little modified. May have pigeon for dinner, and half a pint of ale.

Sept. 28th. (20th day after the operation). Had been gaining finely. Able to ride and walk out, and to eat and drink with relish. Countenance ruddy. Percussion still slightly dull at the lowest part of the back, but the respiration was heard everywhere without râle or ægophony. The murmur was not, however, free except on forced breath, indicating that the lungs did not even then expand with perfect freedom.

Oct. 6. Percussion equal in both backs, and respiration everywhere pure. By advice, he this day went into the country, and on 12th (that is just thirty days after the operation), at his return, he looked and felt better than he had been for many months. No cough or unpleasant symptoms, only slight dyspnoea on active motion. Physical signs—difference of pitch only, no real dulness. Voice well. A slight râle only, on full breath at the bottom of the lungs.

Allowed to go to his business, and has continued perfectly well up to the present date (Nov. 14).

Remarks.—The somewhat latent character of the disease in this case and the sudden relief, are as remarkable as in some of the cases previously detailed. The dyspnoea on the day before the operation had become very great, the nights were very restless, and the patient's whole aspect was that of a man suffering from severe disease, which, in spite of remedies, was progressing steadily. An operation was performed, and instantly a change took place. He felt as he did before illness; his dyspnoea left him; he slept tranquilly at night; his appetite improved, and all the functions of the body went on healthily. On the fourth day, the compressed lung had expanded, and on 20th day from the operation, the respiration was heard everywhere,

and the patient was able to ride, walk, and eat, like a man in health. Would he have progressed so rapidly if the operation had not been performed? Did it not only relieve, but likewise act as the great means of cure? The patient dates from it, the commencement of his cure: I believe him to be right in that opinion.

Case 22.—September 28, 1853.—Mr. ———, lawyer, I saw in Boston. He called at my office. His history was as follows:—Never very strong, but never any severe diseases till the present. This began last March, with some trivial pain in the left side, and cough, with little expectoration. He was believed to have slight pleurisy. The cough decreased much in May and June. Afterwards, all the symptoms had gradually augmented, but he had travelled much and had been able to walk freely, though easily put out of breath within the few weeks previous to calling at my office. He had experienced some difficulty of lying on his left side, and his cough had been more urgent, and within a week, it had been attended by retching and vomiting. His appetite had lessened, and he had been oppressed by food, with a slight tendency to diarrhoea for three or four months. Urine small, normal in color. Debility, emaciation; chills occasionally, and in the summer he had some sweats, none of late. At the visit, he appeared thin, and evidently suffering from long disease, considerable panting while speaking. Pulse 112. The cough, on that morning, had lasted for about three minutes, and had been quite harrassing. The respiratory murmur, was less, front and back, at the left than at the right side, somewhat obscure likewise at the top of the right. No râle anywhere. Flatness, changing with change of posture, and ægophony over the lower half of the back. Heart to the right of the sternum. He had had very little medical treatment.

I decided immediately, that the *first* thing to be done was to remove the collected fluid; accordingly, October 2d, I punctured in the usual spot, and drew off seventy six ounces of yellow, coagulable serum. The heart fell back at least 1½ inches towards its normal position. The murmur was heard more distinctly front and back. The percussion was less dull. Ordered to keep quiet, to take light food, Iodide of Potassium grs.ii. three times daily, and to use Tincture of Iodine externally.

From the time of the operation there was a steady improvement, though slow. On 5th, he reported no dyspnoea, and that the cough was very much relieved. Pulse 84, softer and fuller. Urine a little increased, and lighter colored. On 7th (5th day after the puncture), looked much better; wanted to eat more and to go out. He had sweats at night. Murmur heard to the base, and fine taffeta crumpling on full breath. Resonance of voice, which had been very marked before the operation along the vertebræ,

was much less. No ægophony. Heart in *normal position*. Walk out carefully; eat simple meats, half glass of ale at dinner.

October 22 (20 days after operation). Had sweated less. Able to walk two or three miles daily; felt he was gradually improving. Right side of the chest three-quarters of an inch *larger than the affected one*. Still quite dull tone on back. On full breath, lung seemed to expand with crumpling.

October 29 (27th day). Percussion almost equal in backs. Respiration heard indistinctly, but unequivocally, everywhere. General symptoms also much better; cough very slight; no sweating and countenance improving daily.

November 5 (34th day). His report was,—Had gained strength; cough, very little; no hectic; appetite and digestion perfect; on percussion, nowhere really dull, but least clear outside and under axilla; respiration very obscure there; resonance of the voice less, behind.

This gentleman is still under treatment, and daily improving. He attends now (Nov. 14) moderately to business. Whether the lung will ever come fully up, so that the murmur will be heard in both equally well, is a question I cannot answer,—time must decide. But as to the utility of the operation, no one can doubt. Look at the facts:—A pleurisy had existed, with a gradually augmenting effusion and increasing disturbance of the general system, from March till October 2. Then an operation was done. Immediately, a change took place. The dislocated heart resumed its natural position, and the circulation went on well. The lung, that for months has been compressed, expanded; the dyspnœa subsided. The digestive functions were restored. The hectic left; and all these events took place within a month! Surely, no one can doubt,—*first*, that the operation was the primary cause of the cure; *second*, that without it he would probably have gradually grown worse, and would have been an invalid for months. Possibly, after months, a fistulous opening might have formed.

Case 24.—October 14, 1853. E. C——. Æt. 40. Irish laborer. Always strong, but in former days had very freely indulged all his appetites. His disease commenced about the first of January, 1853, after a long exposure, during more than twenty-four hours, while endeavoring to restore to its proper place a locomotive that had run off the track. In addition to an exposure to a violent snow storm, he had had very hard labor. He felt at the time, that he had taken “a bad cold.” Very soon afterwards, a cough began, slight and dry at first, with “stitches” in the right side. Once he had raised a tea-spoonful of blood, as he believed, from his throat. He did not work for three months. Finally, he undertook again to do so,

although the cough continued, and he knew that he was weak and by no means well. He was frequently disposed to vomit. This stomachic difficulty was much more troublesome than the pulmonary ones.

He continued vomiting more or less daily until July 19, when he had an access of it more serious than any of its predecessors. He was obliged to cease working from that time; and although able to go about the house and was often out of doors, he had been a permanent invalid till the period of his visit to me. In order to do this, he had walked upwards of two miles and a half, and without much difficulty. I learned that the vomiting ceased three months before; his cough had been less severe, but it was at times very harrassing; his appetite was very poor; he could not bear meat or liquors, because of the increase of the cough; his alvine discharges had been regular till a few days before his visit, since then he had been costive. He had had hectic paroxysms, but less for a period previously to my seeing him. Eight or nine weeks before that, he accidentally observed, on moving in his chair, that there was a "swashing" in his chest. This phenomenon had continued on every rapid change of posture. He had no pain or other serious symptom in connection with it. His aspect, at his first visit, was that of a man not very ill, but evidently suffering with dyspnœa, as evinced by his short, panting breath, his lividity, &c. Pulse 92, regular. Could not lie on right side because of cough, which last was least when he was quiet. *Swashing* heard at a distance from the patient; intercostal fluctuation perceptible to the hand placed on the side. Tongue, with a thin moist coat; appetite, very poor; costive; urine heavy, dark, smelling strong, and of the usual quantity.

Inspection.—Left chest bulged generally; no local prominence; by measurement $\frac{3}{4}$ inch larger than the right. Respiration wholly absent at the left; puerile at the right. On percussion, resonant in front; but it became totally flat when patient leaned forward to the horizontal position. Behind, flat in the lower half. Voice scarcely heard at the left; no ægophony. Natural at the right. A slight metallic echo (on speaking) in the left breast from under clavicle.

Advised to enter hospital, and to have a puncture made. The patient had, as already stated, observed the existence of fluid, and had asked the attending physician to "open his chest;" which the gentleman declined to do, on the ground (and a true one too, so far as it relates to the *opinion* of the profession), that the medical profession did not allow such a course to be proper or prudent treatment. October 21.—I punctured his chest at the hospital, where he was subsequently treated by my colleague Dr. Storer, until Nov. 1st, when I took charge of the wards. I drew off with the greatest ease, sixty-four ounces of pure pus. Considerable cough occurred during the operation, and one or two bloody sputa were raised; but otherwise he felt

quite comfortable; he was bright in his mind, and was much relieved of "weight." Pulse 96. The lung, however, did not seem disposed to expand, but air appeared to take the place of the fluid, and the metallic tinkling was heard throughout the left chest. Slight hæmorrhage from the puncture; stopped by a little lint and adhesive plaster. A bandage was applied to the chest to relieve the sense of vacancy.

This case is still (Nov. 10) under treatment. He has slowly, but steadily, improved in his general symptoms. He eats the house diet with relish. He has no fever paroxysm, and has more strength than for months past. The lung seems very slowly expanding. The "*swashing*" remains, but there is no return of the fluid. The left side is less than a quarter of an inch larger than the right; that is, it is half an inch smaller since the operation. The heart is still dislocated, though less so than before the puncture. A good vesicular respiration is heard to the spine of the scapula. Below that, to the angle, it is less distinct; also, still less in front. Outside, it is not heard. No crackling anywhere. A metallic echo is perceptible, with each vocal resonance, under the clavicle and below, around to the angle of the scapula. Above, to the spine of the scapula, it is distant. At the very apex it is not heard. I believe that the lung lies in contact with the parietes at the apex, at a short distance from it, down the back, and that it has expanded a little generally.

The prognosis in this case is doubtful. Evidently, the rational signs have improved. The patient feels and looks better. He can lie on the right side, which he could not do. He eats meat now, which distressed him and increased his cough previously. The lung likewise has expanded slightly. From week to week it seems very slowly getting larger. I have determined that if the fluid returns again, I shall puncture and inject into the cavity Tinct. of Iodine, as recommended by Drs. Boinet* and Aran.† I see no objection to using such treatment, even where air alone exists; but I prefer to wait for the present, while the patient continues to improve.

Case 24.—This was a case attended by Dr. J. M. Warren, which he kindly allowed me to see. I saw him October 20, 1853. *Æt.* 21. A farmer. It appeared he had been ill with pleurisy since March. He had, however, been able to walk out of doors, from two weeks after his first attack. In June, he suddenly began to raise a large quantity of pus. This raising of pus and mucus daily, had continued up to the hour of my seeing him. It was then amounting to about a quart in the twenty-four hours. His pulse was quick, 118 to 120; he was emaciated, but still did not look exactly tuberculous. His appetite was good; his bowels were regular. No

* Archives Générales de Médecine.

† L'Union Médicale, August, 1853.

hectics. Gurgling was heard on succussion. The right side was larger than the left, but no part of it was pointing. There was total flatness on percussion, from the top to the base of the lung, front and back. Crackling at the top, but no tubular sound or extreme vocal resonance in front.

Dr. Warren punctured between the 8th and 9th ribs behind, and one pint and a half of pus was removed with ease. The patient felt relieved. Crackling was heard lower down, and the respiratory murmur was heard along the spine, slightly but unequivocally.

November 5. He visited Dr. W., in Boston, who found him much better, and the lung was expanded much more. I did not see him. He remains still under treatment. He came to Boston, thinking to be operated on again; but Dr. W. found such improvement in the rational and physical signs, that he forbore.

Ten days afterwards, November 15 (26 days from the first operation), I saw him again. He reported that for several days after the puncture, he had coughed scarcely at all, and had improved much in his general feeling; but within a week the cough had been as bad and the expectoration as copious. On percussion, there was some resonance to an inch above the angle of the scapula, and the respiration was heard there, but still much less throughout the side than on the other lung. Twelve ounces of pus were removed with much comfort, and the patient returned to the country.

Is not this a proper case for a permanent opening and for iodine injections? Air evidently gets into the pleura through the lungs, so that the objection of admitting the external air by a permanent opening is not valid. 2d.—The pus now accumulates, and has to be *coughed up*. Would it not be better to let it *run out*? Probably, the cough would be much lessened thereby.

[To be continued.]

PART II.—REVIEWS AND BIBLIOGRAPHY.

Diseases of the Lungs from Mechanical causes, and Inquiries into the condition of the Artisans exposed to the inhalation of dust. By G. CALVERT HOLLAND, ESQ., M.D., *Physician extraordinary to the Sheffield General Infirmary; formerly President of the Hunterian and Royal Physical Societies, Edinburgh; and Bachelor of Letters of the University of Paris.* London. 8vo. pp. 100.

By the collection and publication of the interesting statistics contained in this small work, Dr. Holland has not only made a valuable addition to medical science, but, by exciting attention to the evils he portrays, has contributed, we believe, to meliorate ultimately, the suffering condition of

that class of artisans, who constitute a large body of operatives, not only in Europe but in the United States.

Although the work is not a recent issue from the press, yet, as large numbers of artisans are constantly employed in the different manufactories of our own country, in the steel, iron, stone, marble, burr-mill-stone and other works, in which the respiration of the operatives is disturbed, and fatal disease in numerous instances induced, by the constant inhalation of gritty or metallic particles,—we have deemed it a matter of sufficient importance, by a reference to this work to call the attention of the profession and the public to the appalling evils arising from these occupations.

Of the great number of artisans employed in the extensive manufactories of Sheffield, one of the largest manufacturing towns of England, the grinders constitute much the most numerous class. Not less than three thousand persons are constantly occupied in grinding the various articles of cutlery, hardware, &c., of whom a very large proportion die early of thoracic disease. During a period of eleven years, Dr. Holland was attached as physician to the General Infirmary of Sheffield, and this position afforded the author an extensive opportunity for observing the nature and cause of this disorder.

The object of the present work, is to point out the exceedingly noxious influence exerted on the respiratory organs by the inhalation of floating particles of stone and metal; and to recommend those measures, both prophylactic and curative, that should be employed for those who may be subjected to these influences.

Grinding on an extensive scale, Dr. Holland states, is almost peculiar to Sheffield and its neighborhood. Their principal productions, cutlery and edge-tools, are all ground, either upon a dry or a wet stone. Many articles are ground upon both, on the dry first and on the wet one afterwards; but the injurious effects of the occupation belong particularly to dry grinding. Previous to the employment of steam as a propulsive power, all “grinding wheels” were situated on the rivers in the neighborhood of the town. The consequence was, that, whether the grinders were resident in the country or town, they had the advantage of an abundance of fresh air, and daily exercise. At that time dry grinding was almost unknown. Its introduction has been owing to the gradual diminution in the scale of wages; and it is now extensively employed, for the reason that the one process is much more expeditious than the other.

“The modern grinding wheels are built in the town, and are several stories in height, and no regard whatever has been given to the ventilation of them. Each room is occupied by eight or ten individuals, belonging to the different branches. In former times, the wheels were well ventilated by dilapidated roofs, shattered doors, and broken windows; but in the recent

structures, these natural means are carefully guarded against, so that the clouds of dust which rise from the stone envelope the grinder, and continue to play around his head. The respiration is continually disturbed by the inhalation of the numerous particles of floating stone and metal."—p. 3.

As might have been anticipated, pulmonary diseases have greatly increased in frequency among this class of artisans; and this change "is principally to be ascribed, to the general introduction of dry grinding, and the less ventilation secured by the expensive structures of modern times."—Dr. Holland found it very difficult to trace the first morbid effects arising from the constant breathing of an atmosphere surcharged with gritty and metallic particles. That portion of the mucous membrane of the air-passages against which the inhaled atmosphere first impinges, is primarily affected. Hence, irritation of the lining membrane of the throat, larynx, and trachea, inconsiderable at first, and only occasionally complained of, is the earliest inconvenience experienced. There is a cough present, and slight expectoration, the discharge being sometimes colored by the inhaled dust. As the appetite and digestive powers are in no degree affected, nor any of the functions of the system perceptibly disturbed, in the first stage of the disease, the above symptoms will, in some instances continue for several years without any serious aggravation. Ordinarily, however, unless the individual possesses, originally, a good constitution, the second stage early supervenes, in which the cough is more urgent and the difficulty of breathing is greatly increased; there is an expression of suffering and anxiety; the body is bent forward, and the slightest exertion induces dyspnoea, and aggravates the cough. Even in this stage of the disease, the appetite is generally good, and the process of emaciation is remarkably slow in many instances. The pulse is but slightly quickened, only averaging ordinarily, between seventy-five and eighty-five pulsations in the minute. The chest generally sounds well on percussion; but auscultation reveals puerile respiration in some parts of the lungs, increased bronchial in others, "conveying the impression that the respiration is principally carried on through enlarged bronchial ramifications." In the third and last stage, "the wretched victim is an object painful to contemplate." All the symptoms of the preceding stages are greatly aggravated. There is very copious expectoration, with extremely short and laborious respiration, "and the patient at length dies from long-continued suffering and exhaustion."

We shall pass over many of the author's views regarding the pathology of the disease, as well as his conclusions respecting the "modifications in the characters of phthisis from a difference in the circumstances in which it occurs." His are views and opinions that will not be sustained by the established pathological discoveries of the present day. The striking difference in the progress of the disease, observed by the author, in the two classes of persons who are the subjects of it, as well as the difference in the

physical signs manifested, and in the pathological changes, are points of much interest.

“In treating of the influence of gritty and metallic particles on the respiratory organs, there are two important structural changes to which they give rise,—to which no writer has ever alluded: *an enlargement of the bronchial tubes, and an expansion of the pulmonary tissue.* These are not invariable effects, but they are produced in an immense number of instances, as we shall subsequently endeavor to prove; and the production of them, though accompanied with serious symptoms, distressing cough, and difficulty of breathing, are, nevertheless, more favorable to the prolongation of life, than the absence of them, in the artisan suffering from other morbid conditions induced by the inhalation of such particles.

“The great mortality among grinders is from 21 to 35 years of age. The delicate in constitution and the wretched in circumstances, break up long before the latter period, of degeneration of the lungs, presenting the ordinary symptoms of tuberculous phthisis. With very limited exceptions, the few who live beyond 35 years of age—in the most deleterious branches of grinding—live in consequence of these structural changes; or, in language unexceptionable in this stage of the inquiry, they exhibit the symptoms by which they are characterized.

“When the constitution is vigorous, and the individual possesses a well-developed chest, the injurious influence of the dust is, to a great extent, confined to the production of bronchial irritation, at least for a considerable period, the result of which is a frequent and severe cough, existing for several years, unaccompanied with any morbid derangement of the animal economy. The pulse is slightly, if at all, accelerated; nor do we observe any fever or disturbance of the digestive powers. The continuance of the cough excites little anxiety in the artisan, interfering in no degree with his daily occupations. At length, however, he complains of difficulty of breathing, which is aggravated on every exertion, whether of walking or coughing; and then he is regarded, by himself and others, as attacked with asthma,—a term which is almost universally employed here to designate his symptoms. This form of disease is no *certain* protection against the inroads of further pulmonary degeneration, as tubercles, hepatization, or any other structural change. The enlargement of the bronchial tubes, on which it would appear chiefly, if not exclusively, to depend, affords nevertheless, to an important degree, such protection; and the longest-lived among the diseased grinders, by many years, are found in the asthmatic class.”—pp. 12, 13.

That the presence of asthma, whether it be the ordinary form of the disease, or the “grinder’s asthma,” proves favorable to the prolongation of life, is a popular opinion, very generally entertained. This opinion is not altogether unfounded. This immunity afforded by asthma, is not so much the result of the disease, as it is dependent on the pathological change produced by the disease; namely—upon the *bronchial dilatations*. As the causes upon which bronchial dilatation depends, and the influence which this organic lesion exerts on the progress and development of tuberculosis, are not generally understood, we shall take occasion here to make some remarks on this most frequently-occurring alteration.

Dr. Holland supposes that the enlargement of the bronchial tubes and the expansion of the pulmonary tissue, observed in a large number of the cases that came under his observation, were induced by the violent, full, and long-continued inspirations and expirations occasioned by coughing.

“When ten times the amount of air, not only in individual acts but in a given time, enters the lungs, these organs are expanded in a correspondingly increased proportion. The air tubes and the cells, are under the necessity of doing ten times the amount of functional duty; and it is a law of the animal system, that the development or enlargement of an organic apparatus is according to the exercise of it.” p. 37.

Most pathologists, since the time of Laennec, have attributed dilatation of the bronchi to the same mechanical cause. Before the discoveries of Laennec, this organic lesion had been entirely overlooked by physicians and anatomists. He observed and described, with much accuracy, this structural change; but he attributed the lesion to the mechanical pressure exerted on the tunics of the tube by voluminous sputa accumulated in the spot where they had been secreted under the impulse of an energetic cough. Andral, to some extent, adopts the views of Laennec; but with regard to some of the varieties of dilated bronchi, those which are attended with hypertrophy of the bronchial tunics, he is of the opinion that the augmentation of the diameter of the tubes must be explained in the same manner as the augmented thickness of the tissue, both being the result of a vital hypertrophy—not produced in the mechanical manner described by Laennec. Dr. Williams, more in accordance with the views of Laennec, declares that the “physical cause of dilatation of the bronchi, is to be found in the acts of respiration and cough, exerting a degree of pressure on the softened membrane greater than its elasticity can resist.”* The theory first promulgated by Carrigan, to explain the cause of bronchial dilatation, and which has been adopted, with some limitations, by Rokitansky, and published in his late works, under the head of “Abnormal Conditions of the Air-Passages” † is a theory directly the opposite to that of Laennec. Carrigan regards the lesion as dependent, primarily, on a diseased condition of the parenchymatous portion of the lung itself,—a disease to which, from its being allied in its anatomical characters to *cirrhosis of the liver*, he has given the name of *cirrhosis of the lungs*. The destruction of the cellular spaces and the obliteration of the parenchyma of the lung, which is found in bronchial dilatation, Carrigan asserts, is the *primary* disease, occurring spontaneously;

* Cyclopaedia of Pract. Med., Vol. I. Art., Bronchitis.

† A Manual of Pathological Anatomy. By Carl Rokitansky, M. D. Vol. IV. Sydenham Society Edition.

while the expansion of the bronchi is *consecutive*, and is the result, not only of a tendency to fill the space rendered vacant, and on the expansion occurring in the act of inspiration, but also on the traction exerted on the opposite walls of the bronchial tubes, by the shrinking of the surrounding tissue. This primary disease of the parenchyma is considered by Carrigan as an inflammation analogous to that of pneumonia, inasmuch as it extends itself insidiously from one lobule to another, and deposits a product which becomes indurated and fused, or blended as it were, with the original tissue, thus obliterating and destroying the air-cells.

The views of Rokitansky in regard to the primary changes in dilatation of the bronchi, differ somewhat from those entertained by Carrigan.—“Whichever be the form under which bronchial dilatation appears,” says this great pathologist, “*bronchitis* must be regarded as the most frequent primary cause. It acts in different ways, but not mechanically from accumulation of mucus according to the theory of Laennec.”—vol. iv. p. 9.

There are two principal forms of bronchial dilatation described by Rokitansky, which are “remarkable for the frequency with which they occur, and for the degree of development which they attain. They constitute one of the most important diseases of the air passages.”

In the first variety, in which a bronchial tube is *uniformly dilated*, there is present atony and paralysis of the contractile and irritable elements of the tube, dependent, according to Rokitansky, on a chronic form of bronchial inflammation, in which many of the smaller tubes become completely obstructed by a blennorrhoeal secretion. Under these circumstances their walls, through the influence of the inspirations and the concussion induced by the paroxysms of cough, undergo rapid and frequently extensive dilatation. This form of bronchial dilatation affects that portion of the bronchial system in which catarrh occurs. The second variety is denominated the *saccular* form of bronchial dilatation. It, on the other hand, is not developed in that part of the bronchi which is the seat of catarrh, but occurs in their terminal branches, and is the consequence of bronchitis arising in these portions of the bronchi. As the result of this inflammation, tumefaction of the mucous membrane takes place, the secretions are accumulated in the final ramifications; and these, at length, become completely obliterated. The obstruction thus presented to the free ingress of the inspired air, is attended with difficult and prolonged inspirations, thereby occasioning saccular dilatations in those portions of the bronchial tubes which are perfectly impermeable. It is the opinion of Rokitansky “that the parenchyma surrounding this portion of the bronchial system collapses, and thus produces a space which becomes filled by the dilating bronchus.” In those cases where the disease is extensive, where the bronchial tubes of one lung are more or less dilated, the parenchyma becomes shrivelled and obliterated, the volume of

the lung is contracted, and there occurs a sinking of the walls of the thorax over the pulmonary tissue which surrounds the dilated bronchial tubes. In some instances these saccular dilatations become isolated, are partially filled with pus, and they are then quite likely to be mistaken for *tuberculous cavities*. It is under these circumstances, when a large portion of the lung becomes obliterated in consequence of extensive bronchial dilatation, that the condition to which Dr. Holland alludes, namely, "an expansion of the pulmonary tissue," occurs. But this increased development takes place in the otherwise normal and permeable portions of the lungs.

On this subject, and in reference to the immunity from pulmonary consumption afforded by extensive bronchial dilatation, Rokitsansky remarks—

"In consequence of the obliteration of a large extent of lung, produced by extensive bronchial dilatation, we find that this affection gives rise to a development of the right side of the heart in the form of active dilatation, stasis, and dilatation of the whole venous system, cyanosis, and vicarious development of the permeable portions of the lungs, which not unfrequently lead to bronchial and pulmonary hæmorrhage (*hæmoptoic infarctus*). If the bronchial dilatation be very highly developed, it induces collapse, emaciation, a cachectic appearance, dropsy, and finally total exhaustion.

In consequence of the venosity and cyanosis to which it gives rise, it affords a very striking immunity, not only from pulmonary tubercles, but from tuberculosis in general. The fact that bronchial dilatation exerts an excluding influence on pulmonary tuberculosis has been known since the time of Laennec; and although the reasons for this influence are not understood, it has served, in recent times, as the basis of several plans for the cure of pulmonary consumption."

But to return to our author. Dr. Holland found that to whatever kind of dust the artisan was exposed in grinding, whether it was composed of stone or metal, the disease which it induced primarily in the larynx and trachea, was invariably extended, if the cause was continued, "to the principal divisions of the bronchi, and ultimately to their numerous ramifications."—Through the whole extent of the larynx, trachea, and bronchial divisions, their lining membrane was found thickened and often excessively pale. The structural changes in the mucous membrane of the bronchi, and of their ramifications, are frequently much greater than in the membrane of the larynx and trachea. Beside the above changes, discovered after death, in those who died of the phthisis of grinders, the author mentions—1. Adhesions between the lungs and the pleura costalis. These were generally found to be quite firm and extensive. 2. Extensive enlargement of the bronchial glands, or rather their conversion, immediately at the bifurcation of the trachea, "into a black, hard, gritty substance, varying in size from half a marble to a large hazel-nut." 3. Similar substances and analogous in composition, but smaller in size, were found in several cases, in almost every part of the lungs. These were detected, says Dr. Holland "in portions of

these organs which exhibited every degree of disorganization, from the first questionable change of structure to the formation of softened tuberculous masses." 4. The engorgement of the lungs, or certain portions of them, with a black or dark fluid.

In the treatment of the disease, Dr. Holland does not propose the adoption of any measures new or peculiar. When the symptoms were urgent, such as cough or difficulty of breathing, the greatest benefit was observed from the application of leeches, followed occasionally by blisters. As internal remedies, those which proved the most serviceable were emetics, expectorants, alteratives, and tonics. In those cases where a distressing cough and copious expectoration were present, the author found emetics often of very great advantage. "They relieved the cough and difficulty of breathing, and diminished the expectoration very much in amount."

The attention of the author, and of other benevolent individuals, was early directed to the pernicious influence exerted upon the health of the thousands of artisans, who, in their town, pursued the grinder's occupation; and many attempts were made to devise some method to mitigate the evils under which they labored. The result of these efforts was the invention of a magnetic guard, or mouthpiece, consisting of an arrangement of a series of magnets about the mouth, which served to attract the metallic particles evolved in the process of grinding. This ingenious contrivance effected the desired object only to a limited extent. The dust to which the artisan is exposed, consists of gritty as well as metallic particles—both equally injurious, and the latter only were arrested by the magnetic mouthpiece. This apparatus was never generally adopted. A plan was at length suggested, which Dr. Holland avers, is "not less simple than efficient." It is thus described by the author:

"A wooden funnel, from ten to twelve inches square, is placed a little above the surface of the revolving stone, on the side the farthest from the grinder, and this funnel terminates in a channel immediately under the surface of the floor; *or we may consider the channel simply as the continuation of the funnel*, in order to avoid any confusion in the explanation. The channel varies in length, according to the situation of the grinder in reference to the point where it is most convenient to get quit of the dust. If we suppose that eight or ten grinders work in the same room, each has his own funnel and channel, *and they all terminate in one common channel, the capacity of which is perhaps twice or three times as great as each of the subordinate or branch channels*. The point where they terminate is always close to an external wall. At this point, within the general channel, a fan is placed, somewhat in form like that used in winnowing corn, and to this is attached a strap, which passes upwards and over a pulley, so that whatever puts the pulley in motion causes the fan also to revolve. The pulley is placed in connection with the machinery which turns the stone, so that whenever the grinder adjusts his machinery to work, he necessarily sets the pulley and

the fan in motion. The fan, acting at this point, whatever may be the length of any of the subordinate channels, causes a strong current to flow from the mouth of each funnel, which carries along with it all the gritty and metallic particles evolved, leaving the room in which the operations are pursued free from any perceptible dust. When the whole apparatus is perfect and in excellent condition, the atmosphere of the place is almost as healthy as that of a drawing-room."

In the last chapter of this work the author has given a very full statistical account of the different rates of mortality occurring among the workmen employed in the several branches of grinding, and the influence of these occupations on the moral character and social position of the artisans. With regard to the latter points, the investigations which were undertaken and the facts obtained proved conclusively, that the more destructive the branch, the more ignorant, reckless, and dissipated are the workmen.

Although grinding, in all its branches, exerts a most pernicious influence on the health of the different artisans, yet all branches are not equally deleterious. In his investigations into the injurious nature of these different occupations, the author includes the scissors-grinders, fork-grinders, needle-grinders, razor-grinders, penknife-grinders, tableknife-grinders, saw-grinders, file-grinders, and scythe-grinders.

The ages of the workmen in any of these branches of the trade, served as a general indication of the healthy or prejudicial nature of the occupation. Thus, of 213 adult workmen employed as scissors-grinders, 161 of the number were under 40 years of age; and this is an evidence of the destructive tendency of this branch of grinding. But the greatest fatality appears to be among the fork-grinders. Such is the destructive tendency of this branch, that grinders of other departments frequently refuse to work in the same rooms, and the sick clubs of the town have a special rule against the admission of persons of this occupation.

Dr. Holland has given the following statistics of this branch :

Men employed,	.	.	.	.	.	97
Boys,	.	.	.	.	.	100
The number of men from 21 to 25 years of age,	.	.	.	.	.	28
do. do. do. 20 " 30	do.	.	.	.	.	28
do. do. do. 31 " 35	do.	.	.	.	.	8
do. do. do. 35 " 39	do.	.	.	.	.	14
do. do. do. 40 and upwards,	.	.	.	.	.	19
						—
						97
The number of boys from 10 to 14 years of age,	.	.	.	.	.	39
do. do. do. 15 " 19	do.	.	.	.	.	51
do. do. do. at 20	do.	.	.	.	.	10
						—

Only 3 individuals, of the 19 men above 40 years of age, lived to be 50 years old. Of this number, ten either commenced this occupation late in life, or had passed several years in the army. Deducting, therefore, these ten from 97, there remained 56 under 30 years of age, eight from 30 to 35, fourteen from 35 to 40, nine above 40 and under 50; and in the class from 35 to 40 there are some who had not worked regularly at the trade from youth. Under 30 years there were 56, and only eight from 30 to 35. It is therefore manifest that the greater portion of the 56 must have died under 30 years of age!

The following table is given by Dr. Holland to exhibit "the awful destruction of human life in this particular branch."

Comparison of Deaths at particular ages, out of 1,000 deaths of persons above 20 years of age—in England and Wales, in Sheffield generally, and of the Fork-Grinders particularly.

Ages.	England and Wales.	Sheffield.	Fork Grinders.
20 to 29,	160	184	475
30 " 39,	136	164	410
40 " 49,	126	158	115
50 " 59,	127	155	0
<hr/>			
20 " 60,	549	661	1000

"Thus, out of 1,000 deaths of persons above 20 years of age, the proportion between 20 and 30 in England and Wales, is 160; in Sheffield, 184; but amongst the fork-grinders, the proportion is the appalling number, 475; so that between these two periods, three in this trade die to one in the kingdom generally.

Between the ages of 30 and 40, a still greater disparity presents itself. In the kingdom, 136 only in the 1,000 die; in Sheffield, 164; but in the fork-grinding branch 410; so that between 20 and 40 years of age, in this trade, 885 perish out of the 1,000; while in the kingdom at large, only 296. Another step in the analysis, and we perceive that between 40 and 50, in the kingdom 126 die, in this town 158, and in this branch 115, which completes the 1,000. *They are all killed off.*"

The occupation of the needle-grinder appears to be equally destructive to life with that of the fork-grinder. In his examinations into the influence of this branch, the author's field for observation and analysis was quite limited, inasmuch as the number employed are small; for a single individual is able to grind an immense quantity of needles. The dust evolved in needle-grinding, combines a much larger amount of steel than is formed by any other kind of grinding. A regulation has always existed in the needle-manufactories, which alone is evidence of the greatly destructive influence of this occupation; the time for working is limited to six hours per day. Notwithstanding this regulation, and the fact also that the operatives employed as needle-grinders were vigorous young men, from 17 to 20 years of

age, when they entered upon their occupation, yet the investigations proved, that a majority of the workmen were destroyed before 30 years of age.

The analysis of this interesting work of Dr. Holland, and the statistical facts which we have presented, are sufficient to call attention to this important subject. Still farther observations on the influence of mechanical causes in the production of thoracic disease, in our own country, are much needed; and we earnestly hope that practitioners residing near large manufactories, where the operatives are exposed, in their occupations, to the constant inhalation of an atmosphere charged either with gritty or metallic particles, will aid, so far as may be in their power to do it, in collecting and recording observations on this hitherto much-neglected cause of disease.

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Memoirs of JOHN ABERNETHY, by GEORGE MACILWAIN, F. R. C. S. New York, Harper & Brothers, 1853.

This book has a very inappropriate motto,—“The evil that men do lives after them; the good is often interred with their bones.” If *John Abernethy* did any evil in his day—which lasted from April 3d, 1764, till April 20th, 1831—it is dead now. The good he did was never interred with his bones. The specific gravity of such services to science would never allow them to remain beneath the surface. The book is a good one, though not near as good as it should have been. It is gossiping, sprightly, and interesting of course; but there is too much wandering from the subject,—too many discussions of morals, which *Abernethy's* life only suggests. Still, we are thankful for every new thing told us of so good a man.

He was one of those whom his compeers recognized as a wit; his humor pervaded all he said; while his manners among his patients were so rough, that he has been esteemed the prince of bullies in the sick-room. Of such a man, it would naturally be expected that a thousand stories would be told for which there was very little foundation in fact. All the witty sayings and the rude speeches handed down by the story-tellers, of which the authors were forgotten, would naturally be imputed to one of whom they might so well have been true. The book has an interest for those who are outside, quite as strong as for those that are within the profession. It is through such eccentric members that the world becomes acquainted with a profession.

Abernethy was descended from a family of clergymen: he was “a sharp boy,” was apprenticed to Sir Charles Blicke at fifteen, was a good student, attended the lectures of Sir William Blizard and Mr. Pott, was elected assistant surgeon of St. Bartholomew's Hospital when twenty-three years old, and remained, without promotion, at that post for twenty-eight years. At the same time he commenced his lectures, to which he gave the better

portion of his life. He was married at 36, after a very brief and business-like courtship, and did not miss of his lecture on the same day. From the first, he was very industrious; and "after the public once got hold of him," his practice was larger than he could well attend to. His contributions to the medical journals of his day added much to his reputation. These, together with his *Physiological Essays*, his *Surgical Cases*, and his book on the *Constitutional Origin of Local Diseases*, or his "My Book," as it was popularly known, formed the basis of his reputation as an author. That he is responsible for a thousand unnecessary purgings, no one doubts. "My Book" made physicking fashionable. It was the easiest thing in the world for the puzzled practitioner to trace through the ever-ready nervous system all unpleasant symptoms to the stomach, and then to attack them with blue pill and senna tea. Great was the pity that patients would not always recover on such treatment. It was a wonderful simplification of our science; and there are yet to be found in the country enthusiastic practitioners who would feel at a loss for tools to work with, though in a drug-shop, if their blue pill, senna tea, and "Abernethy's bitters" were missing.

That famous "seventy-second page" of "My Book" became the whole creed of one class of medical men; and so infinite mischief resulted to the invalid world. But the doctrine of the sympathy of the whole system with every part,—that local disease may affect the whole system, and, conversely, that disturbance of the whole system may affect each or any part,—was first made familiar and popularized to the profession through *John Abernethy*. All honor to the noble hobby-rider for that. He was a model lecturer, a forcible writer, and, errors excepted, a right good man. He hated humbugs. He so thoroughly despised affectation and flattery, that in his manners he was very much of a bear. To the rich and the great he was most unpardonably rude; to the poor, especially to his hospital patients, though still rough, he was the soul of kindness. He always drank the best port, and suffered sadly at the last from rheumatism, which he would have told a patient was the natural consequence. He was the interpreter to the profession of John Hunter's doctrines and his great labors. When Mr. Lawrence attacked him and his exposition of Hunter's doctrine of life, Abernethy, without a doubt, did not fail to give him back as good as he sent. Dr. Macilwain is sadly wrong, we think, in "forbearing quotations" enough to inform us as to the merits of this interesting controversy. He retired from each position that he ever held in life, with honor. Kept for a great part of his life in positions subordinate to his inferiors, he carried more honor to than he bore away from any office he ever held. His wit stayed by him to the last. By his own request his body was not examined after death. Fortunately, no such prohibition was extended to his works: they continue to be examined daily.

Hufeland's Art of Prolonging Life. Edited by ERASMUS WILSON, F.R.S.
Boston: Ticknor, Reed, and Fields. 1854.

The great desire of the present generation is, to carry up the continuance of human life to the maximum extent that is consistent with the highest daily enjoyment of it. They want the draught of life sweetened to the palate, and its cup full. If too bitter, the increase of suicides shows that it is spurned. If too much diluted, it is no less distasteful to the majority. The book that lucidly and truly sets down how a happy life may be prolonged, should be a popular book. And this the work of Hufeland does in very agreeable style. Its author, *Christopher William Hufeland*, was both an eminent physician and a Prussian counsellor of state,—born in 1762,—first practised at Weimar,—was made professor at Jena in 1793,—was appointed physician to the king in 1801,—wrote an excellent “System of Medicine,”—died in 1836, at what may be called a respectable age for one who presumed to teach how age could be reached, and his works do follow him. The book is an old one, of course; in other words, those who study it drink directly from a fountain. The most sensitive cannot detect in it the slightest leaden taste that knowledge is apt to acquire in coming through the leaden pipes of modern compilation. In matters that concern longevity, our fathers knew about as much as we do; at any rate we, through the smoke of our daily battle of life, cannot see as clearly distant foes as those who are stationed on hill-tops, above the reach of the thick air,—whether they be the great men of the past or of posterity.

The book is in two parts. The first deals with the curiosities of the “Macrobiotic Art,” of its state among the ancients, of it as connected with astrology, transfusion, and extremes of regimen; of the nature of the vital power in man, in animals, and in plants; of the longevity of various ages; of the signs of long life, and of the world’s desperate modes for securing it. The second part treats of the means that shorten, and those which lengthen life. The work is timely. Our youth are crowding on a great amount of steam, and travelling through the periods of individual life at prodigious speed. There is need of a deal of physical conservatism to prevent a most imprudent consumption of the aggregate of years to which our country and the world is entitled from this generation. A perusal of Hufeland’s judicious maxims will tend to make us take matters more coolly, to eat more slowly, sleep better and longer, work to better advantage by learning to think before acting, lay together less kindling-wood for future repentance, and live to a better old age.

PART III.—CHRONICLE OF MEDICAL PROGRESS.

ANATOMY, PHYSIOLOGY, AND GENERAL PATHOLOGY.

The Pacchionian Bodies.—The following is the result of Prof. Luschka's recent investigations in regard to these bodies:

They are really *normal*, and found in all persons at all ages; though supposed by Sœmmering to be granules of fat, and by Rokitansky and Hyrtl to be the products of inflammatory effusion.

They are found only near the mesial line, along the course of the longitudinal sinus; and are in all cases offsets from the arachnoid membrane, whether cerebral or parietal.

These offsets from the cerebral arachnoid are seen on tearing off portions of the arachnoid over the mesial edge of the hemisphere, appearing under a microscope as mere shaggy projections of its substance, of various form and sizes. Their number varies in different heads; they are generally smaller in the young subject, the size varying from that of a poppy seed to that of a millet seed. They are grey or whitish, and of a firm and fibrous structure; are covered with a scanty epithelium, and contain no vessels. These forms are represented by Figs. 1 and 2.

Those on the *parietal* arachnoid sometimes project through between the separated fibres of the dura mater into the diploe of the cranium even, or into the canal of the longitudinal sinus, or forwards upon the surface of the brain, so as to touch and interlace with the cerebral Pacchi-

onian bodies just described. Sometimes this interlacement is so close, that both layers of the serous membrane are torn away in the attempt to separate them,—a result often incorrectly attributed to pathological adhesions. In this case they assume a complex form, as represented in Fig. 3.

Nothing positive as to their functions is known. They are found only on the human arachnoid, and may perhaps protect or strengthen the veins as they enter the longitudinal sinus.

The most striking *pathological* condition of these bodies is hypertrophy, chiefly met with in the aged, in which condition they may become so in-

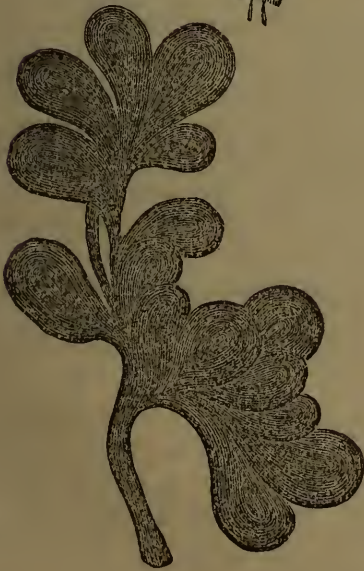
Fig. 1.



Fig. 2.



Fig. 3.



creased in size, as seriously to obstruct the current of the circulation, by projecting into the longitudinal sinus. Pits are sometimes produced in the cranium in a similar manner; and sudden death has, not improbably, been sometimes produced by their downward pressure on the brain.—*Association Journal, from Muller's Archives, 1852.*

The Nun's Murmur. The "Vierteljahrschrift für die Praktische Heilkunde" for July 1853, contains an elaborate article by Prof. Hamernik, upon the peculiar venous murmur named as above. (Nonnengerauch).

Prof. H. first described this disease in 1847, having originally observed it in the internal jugular vein. He has since found it in the innominatæ, both of the venæ cavæ, the external iliac and the femoral. It may also exist in any case of abnormal communication of an artery with a vein. It is a vibration perceptible to the organs of hearing and touch, or the former alone; and which is produced by the agitation of the walls of the vein by its contents.

In the *internal jugular* veins the nun's murmur may be heard under two forms, frequently perceptible at the same time, viz., the "warbling," and the "singing" sound of Laënnec. The former, however, never occurs in any other vein than this, except in case of communication with an artery. The sense of touch can only detect the accompanying vibrations. Here also, the singing is always accompanied by the warbling sound; the latter may, however, be independent of the former. Both forms are modified by the respiratory movements being, not seldom, interrupted at the end of a deeper inspiration, and first reappearing with the following one. When maintained continuously, it increases in strength at each inspiration correspondingly to the fulness of the latter. When all other circumstances are favorable for the production of this murmur, it still does not appear, unless the head is raised somewhat above the level of the thoracic cavity and the vein is rendered moderately tense by an inclination of it to one side.

In the venæ innominatæ and superior cava, this murmur is rare. It is audible on both sides of the sternum at its upper extremity, and upon the right side, even to the cartilage of the third rib. It is continuous, not modified by the respiratory movements, and has been heard only under the form of the singing sound.

Occurring in the inferior cava, the external iliac or the femoral vein the murmur in question is rendered audible, in the appropriate conditions, by the horizontal position of the trunk, and the extension of the limb to be examined. In the femoral, the accompanying vibration may be felt. In these three veins the murmur has been heard to present the singing sound alone; and is continuous, uniform in intensity, and unmodified by the movements of respiration.

Finally, in cases of abnormal communication of an artery with a vein, this murmur is often accompanied with tangible vibrations in the walls of the latter; a part of the momentum of the arterial column of blood being transferred to that of the vein. Here, also, the warbling sound may be heard.

The following is an abstract of Prof. H.'s theory of the nun's murmur:—

In the first place, it should be remarked that this murmur is observed

only in young persons who are both blanched in a notable degree, and at the same time only moderately emaciated; whose thoracic and abdominal organs possess a sufficient degree of elasticity; and whose cutaneous veins are remarkably small.

Now if, in these circumstances, this murmur occur in a vein above the diaphragm (the internal jugular, innominata, or superior cava), it will be found that the bilateral dimensions of the thorax are diminished, its intercostal spaces are depressed, and the arched surface of the diaphragm extends higher than usual, from a corresponding drawing in of the abdomen, and especially from an increase of the horizontal position of the heart—its stroke being over three inches to the left of the sternum, and showing an increased intensity and extent in the cardiac region. But, since all these changes of form and position are produced by an increased contractile power of the lungs, the latter must also modify the circumference of the circulatory organs within the thorax, and especially increase that of the vena cava superior, and the innominatæ, and the auricles of the heart. This increase will augment the velocity of the blood-current in the internal jugular vein, especially during an inspiration, since the cutaneous veins contain but little blood, as before stated; and thus the vibrations in the walls of the jugular, and the murmur will be produced. An increased expansion of the cava and innominatæ, together with an increased poverty of blood in the cutaneous veins may render the current in the internal jugular continuous; in which case the murmur is so, though it is increased in intensity at each inspiration proportionally to the volume of the latter. The fact that the murmur most frequently presents the warbling form in this vein (and which is heard in no other), is probably owing to the fact that the valve at its junction with the innominata (and which may be proved by experiment upon the cadaver, to be closed merely by a dependent position of the head alone), presents, even when open, a considerable narrowing against and an expansion above itself.

This murmur in the internal jugular is most common in young persons who suffer from chlorosis, or tuberculosis; because the preceding conditions are, in such, most frequently met with. Indeed, it is pretty certain that in tuberculous subjects generally, the elasticity of the lungs is increased, even though the tuberculous deposit is in some other organ. This elasticity, on the other hand, diminishes in the aged, in chronic bronchial catarrhs, in pneumonia, typhus, and during convalescence; and in all these the murmur does not exist.

The peculiarity of the murmur occurring in the veins below the diaphragm (inferior cava, external iliac, and femoral)—always the singing sound, and continuous—is explained by the above-mentioned modified relations of the abdomen. But this murmur can occur only when, other circumstances also favoring, the abdominal walls and their contents possess, at least, the ordinary degree of contractile force. This force acts indirectly to distend the inferior cava; and the blood rushing into it, through its tributaries, with increased velocity, also imparts its rapidity of motion to the continuous blood-current in the femoral; and thus perceptible vibrations in the last, and the murmur in all three of these veins may be produced.

[Certain important practical applications of this idea of the control exerted over the venous circulation by the elasticity of the lungs, and the

contractile force of the abdomen and its organs, are suggested by this article, to which we propose to call attention in a subsequent No. of this journal.

E. R. P.]

On the action of Alcohol on the Animal Organism. By Dr. A. DUCHEK.

The object of the experimenter's investigations was chiefly to decide, if possible, the following questions :

1. Does alcohol enter the circulation unaltered, or only after a change in its atomic composition? Does it undergo recomposition in the blood—and how does it leave the organism?

2. What effects are produced on the organism, and especially upon the blood during the presence of alcohol, and its products of recomposition?

3. Are these effects to be explained simply by the chemical processes induced by the alcohol; or does the alcohol induce these processes by its effects upon the nervous system.

The experiments to decide the first question were performed on dogs, by introducing alcohol into the stomach, and by injecting fusel oil into the rectum. The following phenomena were observed in animals thus treated :

1. Intoxication more or less intense, and death sooner or later according to the quantity of alcohol and the rapidity of administration; these phenomena occurring in the same manner, whether the alcohol was injected into the stomach or rectum. 2. The blood appeared perhaps somewhat darker colored, but still had an alkaline re-action; and exhibited a strong smell of Aldehyde, which was also diffused through all the organs of the body. 3. In two cases, Aldehyde was proved to exist in the blood, by chemical tests. 4. No other products of oxidation of alcohol were detected. 5. Alcohol could never be shown to exist in the blood; and 6, the stomach, even a short time after the introduction of alcohol into it, contained only small quantities of this substance. 7. The urine, as well as the fluid of the cerebral ventricles, exhibited a peculiar but evanescent smell of ether. 8. No material anatomical alteration existed in any organ. 9. According to the last experiment, the effect of Amylalcohol appears to be much more considerable than that of Ethylalcohol.

With reference to the first question, he conceives the following conclusions as fairly deducible from his experiments:—

1. Alcohol taken up from the stomach or intestine, penetrates the walls of the same in minute division at many points, and

2. Having entered the vessels is instantaneously changed into Aldehyde.

3. The Aldehyde is conveyed to the rest of the body with the blood.

The experimenter adds that intoxication is not produced by the action of alcohol upon the mucous membrane of the stomach; that this first takes place with the formation of Aldehyde; and that the latter represents the intoxicating principle of Alcohol.

Our author then institutes a set of experiments, to determine whether Aldehyde, introduced directly into the stomach or blood, will produce intoxication; and concludes:—

1. Aldehyde, introduced into the venous blood or stomach, produces the same violent symptoms of intoxication as if alcohol were used.

2. The sudden introduction of a large quantity of Aldehyde into a blood vessel produces mechanical coagulation of the blood.

3. Upon the cessation of the narcosis, the acetic and oxalic acids are found in the blood: from this the Aldehyde appears to be prepared for excretion by the addition of oxygen.

4. If at any one moment a large quantity of Aldehyde is present in the blood, a portion of it may be thrown off unchanged, with the pulmonary exhalations, and its odor thus perceived. This occurs, however, only when very much Aldehyde has been suddenly injected.

In reference to other points of the inquiry, the following are the more important deductions:—

1. After the use of alcohol more air is inhaled, indicating an increased necessity for oxygen.

2. In the expired air is found less carbonic acid; and less water in the pulmonary exhalation.

3. The number of respirations and the arterial pulsation, as well as the animal heat, are augmented, consequently also the process of oxidation in the body is increased.

Finally, in cases of sudden death by alcohol there is no anatomical alteration of the organs, least of all, of the brain and its membranes; only a spurious œdema was found in the lungs. In the cases of intoxication continued for a longer period, there was some emaciation; but no alteration in the brain, not even the thickening of the membranes and effusion in the ventricles mentioned by Huss. In two instances there was blennorrhœa of the external auditory passages. The stomach and its membranes, contrary to the statements of others, were always normal. Only in one instance, where a small quantity of brandy was administered daily, was an abundance of fat found. This case is the only one which can be properly used for inferences concerning the chemical effect of alcohol, since, in the others, the abnormally large quantity of alcohol administered induced widely different results, although not easily explicable (as rapid consumption of the body, &c.), which do not appear to belong to the category of well-determined chemical processes.

Our experimenter thinks he has shown conclusively;—1. That alcohol in the organism is subservient to an increased combustion, the intermediate products of which are found in the blood. 2. That intoxication is dependent upon the existence of Aldehyde in the blood at the time. 3. That the effect of this substance upon the blood is that of the rapid consumption of oxygen; and finally, 4, that hereby the combustion of other substances is interrupted, or rather diminished.—*Vierteljahrschrift für die praktische Heilkunde*.

MATERIA MEDICA, PHARMACY, AND THERAPEUTICS.

On a new Caustic in Malignant Ulceration of the Skin.—M. E. Caze-
nave, of Paris, relates in "L'Union Medicale" two cases of malignant
ulceration of the face, in which he has successfully employed a local appli-
cation made from sulphuric acid and powdered saffron. The remedy is
formed by pouring the acid on the saffron, and applying it in the form of a
soft paste. Its corrosive action is immediately manifested on the diseased

tissues; the paste dries, and falls off in two or three days, in the form of black crusts, which carry with them the eschar. The application is made several times; the wound assumes a healthy red tint, and cicatrization takes place. In one case a year has elapsed, in the other, two years, and the disease has not returned.

The efficacy of this treatment is evidently dependent on the sulphuric acid, which we believe would succeed equally as well if made into a paste with common flour, or any ligneous powder, as with saffron. A paste of sulphuric acid and flour would be worth trying in obstinate cases of phagedenic ulceration.—*Association Med. Journal*.

[We consider this preparation far preferable to the Arsenical Paste sometimes applied to malignant ulcers of the face—as by its use we avoid the unpleasant consequences which may follow the application of the latter.—E. H. D.]

Balm for Chapped Nipples and Broken Chilblains. By M. Cazenave. Take of olive oil, ten ounces, Venice turpentine, two ounces; yellow wax, one ounce; alkanet root, half an ounce; boil together, strain, and add balsam of Peru two and a half drachms; camphor nine and a quarter grains; stir constantly until cold.

Balm for Chilblains.—Take of rectified spirit of turpentine one drachm; sulphuric acid, fifteen grains; olive oil, two and a half drachms; mix. To be rubbed night and morning on unbroken chilblains.

Goulard's Balm.—(Oil of Saturn.) Take of essential oil of turpentine, any quantity; heat it *secundem artem*; decant, &c. Used for dressing phagedenic ulcers, ecthyma, some chronic eczemas, and rupia.

Plenck's Mercurial Balm.—Take of mercury one ounce; lard, three ounces; calomel, seventeen grains and three quarters; elemi ointment, three ounces; mix. Used for dressing venereal ulcers.—*Dublin Quarterly Journal*.

Collodion and Castor Oil in Erysipelas.—M. Guernsant has employed with advantage, in a severe case of erysipelas, an application to the skin consisting of collodion combined with castor oil. The formula was—collodion, 30 parts; castor oil, 2 parts; mix. This varnish was applied once on each three successive days to the parts attacked, and with good effect, as it caused cessation of the burning pain, and the disappearance of the redness. The idea of mixing collodion with castor oil is due to M. Robert Latour.—*Journal de Med., in Med. Times and Gazette*.

Ferruginous Collodion.—Having observed the utility of the salts of iron in erysipelas, M. Aran, to facilitate their application, combined them with collodion, forming a preparation which united the compressive and astringent effects. It consists of equal parts of collodion and Bestuchef's tincture (etherial tincture of perchloride of iron). Spread on the skin it forms a somewhat thinner pellicle than ordinary collodion, but it is much more supple and resisting, so that the limb can be moved in any direction without the cracking which takes place when collodion alone is used. Its adhesion is also more prolonged.—*Brit. and For. Med. Chir. Rev. from Bull. de Therapeutique*.

Neuralgia.—Cazenave recommends, in facial neuralgia an ointment com-

posed of chloroform, 20 parts, prussiate of potash, 10 parts, and lard, 60 parts; a piece the size of a walnut to be rubbed over the painful part. An oiled silk cap is then to be worn some hours.—*Brit. and For. Chirurgical Review*.

Extract of Capsicum.—At the request of a physician, Mr. W. C. BAPES, of Philadelphia, has been induced to prepare the above extract. Although the Pharmacopœia recognises the Infusum Capsici, and also the Tinctura Capsici, yet it is not always convenient to administer a medicine in the form of a liquid; therefore an extract was thought of as being perhaps the most convenient to the medical profession. After some experiments, Mr. B. has found the following formula the most satisfactory:

Take of Powdered Capsicum	8 ounces.
“ Dilute Alcohol,	1½ pint.

Moisten the capsicum with a sufficient quantity of the dilute alcohol, and set the mixture aside in a close vessel to macerate for six days; then place it in a percolator and pour dilute alcohol on it until four pints have been obtained; and evaporate by means of a water bath, to the consistence of an extract. Eight ounces of the powder have been found to yield two ounces of extract. It is very powerful; and when a small quantity is placed on the tongue, it produces an insupportable burning sensation immediately; and, if left too long, will act as an epispastic. It has been used with success combined with quinine, in cases of intermittent fever, occasioned by the too frequent use of ardent spirits. An ointment made in the following manner,

Take of Extract of Capsicum	1 drachm.
“ Simple Cerate	1 ounce.

was found to act as a rubefacient in less than twenty minutes. It may be used with success where a simple rubefacient is required.—*American Journal of Pharmacy*.

Syrup of Lactucarium.—The importance of Lactucarium as an article of the Materia Medica has long been acknowledged by many of the most authoritative writers upon medicine, being regarded by them as particularly suitable to the case of those whose idiosyncrasy forbids the employment of opium, or any of the opiate products.

From the experiments of M. Emile Mouchon—detailed in the 18th vol. of the American Journal of Pharmacy, page 32—which, from the care bestowed upon the subject, seems to be entitled to great respect, ethereal and alcoholic menstrua appear to be inappropriate to the extraction of the active principles of the drug, and even were either of these solvents suitable to the exhaustion of the material, our own experience would forbid us adopting them in a satisfactory method of making a preparation which should contain, in a moderate bulk, an adequate dose of the remedy, and yet be free from alcoholic stimulus, so undesirable in anodyne preparations.

The formula for a syrup, given by M. Mouchon, while it affords a preparation which represents the medicine very completely, leaves it so weak as to be quite objectionable.

A formula which seems to answer the conditions above mentioned, is

offered in the hope that a remedy so deservedly esteemed may be more generally employed:—

Take of English Lactucarium in coarse powder,	grs. 64
Carbonate of Potash,	grs. 32
Distilled Water sufficient,	
Sugar,	oz. 4

Grind the Lactucarium with carbonate of potash, and continue the trituration till the two are thoroughly mixed; add sufficient water to moisten it completely; allow it to stand for twelve hours, and displace slowly till two fluid ounces are obtained; then add the sugar, and dissolve with a gentle heat.

Each fluid drachm of this syrup contains two grains of Lactucarium. J. S. Wiegand in *Am. Jour. of Pharmacy*.

Tannate of Quinia and Tannate of Cinchonia.—These vegetable alkaloids are at present attracting attention in France. They are described as being less unpleasantly bitter, and as equal or superior in therapeutic power to the common preparation of quinia and cinchonia. M. Barreswil communicated last year to the Academy of Medicine in Paris, the processes by which he obtained these tannates; and Buchner, a German pharmacologist, describes an extremely simple method of manufacturing tannate of quinia, which is given as follows in the *Annals of Pharmacy* for June, 1853.—(*Am. Jour Med. Sciences*.)

“Cinchona bark roughly powdered is to be treated with six times its weight of common or household vinegar. After it has macerated during twenty-four hours it is boiled, then decanted, and the residue is treated afresh with more vinegar. These several decoctions are to be mixed together and filtered when perfectly cold; and to them is added an infusion of gall nuts so long as a precipitate is formed. This precipitate is to be collected on a filter, to be then washed, and lastly to be carefully dried.”

Although the tannate of quinia prepared in this manner is not absolutely pure, and therefore requires to be given in larger doses than the sulphate of quinia; yet Buchner considered this preparation as to be particularly recommended, both on account of its cheapness, in comparison with the more expensive drug, sulphate of quinia, and also from the simplicity of its manufacture, on account of the facility with which it may be prepared in almost all pharmaceutical establishments.

A New Kind of Alcohol.—It is said that a new kind of alcohol has been discovered by M. Wurtz, a professor at the Ecole de Medecine at Paris, by repeated distillations of the oil obtained from potatoes. Its composition is represented to be C8, H10, O2. He terms it alcoöl entylique.—(*Provincial Med. and Surgical Journal*, Sept. 29, 1852, p. 518.)

Ozone.—This remarkable substance, which is sometimes, but not universally, present in the atmosphere, and which has been hitherto regarded, when observed, to be an allotropic condition of oxygen, has been discovered by a German chemist at Bonn, not to be so, but a distinct substance, existing as a teroxide of hydrogen, thus continuing the series of the compounds of oxygen with hydrogen. The details of the process by means of which the discovery was effected have not yet been given.—(*Med. Times Gazette*, Oct. 15, 1853.)

OBSTETRICS AND DISEASES OF WOMEN AND CHILDREN.

The conductor having the charge of this department will aim to make Midwifery and Diseases of Women and Children an attractive feature of the MONTHLY. A portion of each number will be devoted to these subjects. In this country, all engaged in the practice of medicine and surgery are called upon to practice midwifery. American midwifery is cosmopolitan. It is not based exclusively either on the British or the Continental schools, but it is characterized by a judicious eclecticism which combines the excellences of both. If we have founded no new school of obstetric doctrine and practice, we at least have contributed, within the last half century, our full share to the various improvements in the practice of this branch of the profession. It is only necessary to refer to the introduction of ergot as an oxytocic by the late Dr. Stearns of this city; to the standard "System of Midwifery," by Dr. Dewees, and his improvements in the treatment of hæmorrhage and convulsion; in the means of facilitating difficult labor; his papers on inversion of the uterus; and thrombus of the vulva; to the unequalled monograph of Dr. Trask on "Rupture of the Uterus;" to the successful operations of Dr. Sims, of this city, for the cure of Vesico-Vaginal Fistula; and to the valuable didactic treatises by American authors on diseases of children, as furnishing ample illustration of the truth of the claim.

In this department of the Journal will be found,

1st. An abstract of all articles in the American Journals, relating to this department, which seem to embody new facts or establish new principles of treatment.

2d. Selections from the English, Scotch, and Irish Medical Journals, and abstracts of translations from the French, German, and Italian. B. F. B.

Chloroform in Midwifery.—At the present time, there is probably no subject of greater importance in obstetrical practice than the exact determination of the value of this powerful agent. The capital fact is established beyond all controversy, that sensibility to pain may be annulled while uterine contractions continue. But many still doubt as to its safety. It is a significant fact that the most prominent objectors are those who have never used it, and the arguments which they bring against its use, if carefully examined, will be found to be based upon facts misunderstood, false reasoning, or prejudice. While, on the other hand, all who understand the nature and properties of this agent, who are familiar with its effect, and who have had a large experience in its use, concur as to its entire safety when given with judgment. Not a single authentic case has been reported where death has resulted from the use of chloroform in midwifery. For obvious reasons, the danger is much less in obstetrics than in surgery. In the former case, it is administered to relieve pain already existing. In the latter it is given to annul the sensibility to anticipated pain. Still the indications and contra-indications for its use are to be clearly and precisely defined. The rules for its administration are to be formularized.

We believe that we shall render a good service to our readers by placing before them an abstract of a most excellent paper on this subject, read before the New-York State Medical Society, by George N. Burwell, M.D., one of the Physicians of the Buffalo Hospital. It is unusually free from crude speculations and theoretical reasonings. It is a pure summary of the facts which the author himself has observed, detailed without effort or pretension, but with a naïveté, sometimes amusing, but always forcing the conviction of the perfect truthfulness of the writer.

It has seemed to us that the literature of this subject has been characterized by a greater brilliancy of genius, a more careful and discriminating observation of facts, and sounder logical reasoning than that of any other one medical subject. The papers of Prof. Simpson, the immortal discoverer of the anæsthetic properties of chloroform and the first to use any anæsthetic agent, in obstetric practice, are remarkable in these respects. To quote from the Medical Times and Gazette, "most of us acknowledge the energy and perseverance with which Dr. Simpson strove to overcome all the opposition which timidity or prejudice raised against the adoption of his discovery, still more admire the manner in which he proved that the amount of present good derived from anæsthetic agents was not counterbalanced by any equivalent amount of future evil; but that on the contrary, the continuous good effects were proved by diminished mortality after operations when chloroform had been used. Then his admirable refutation of the miscalled religious arguments against the use of anæsthetic agents in midwifery, at once removed what was at one time one of the greatest barriers to its general use in assuaging the pains of labor, and forms a claim of gratitude only second to that of proving its utility and safety in allaying the intolerable, inexpressible suffering of the hour of childbirth, so completely, that the question now is, why should any woman undergo unnecessary and injurious suffering, which may be avoided, not only without danger, but with evident advantage?"

The papers on this subject by Nunnely, Dr. Snow and Dr. Murphy, Prof. of Midwifery in the University College of London, are each remarkable; but it is not to our present purpose to allude to their peculiar excellences. We have certainly met with no paper on the subject during the past year, by either foreign or American writers, of equal merit with that of Dr. Burwell.

The following are the data on which his remarks are based.

Total number of cases in which chloroform was given for a greater or less length of time,	180
Number of cases where the relief obtained from the chloroform was decided,	122
" " where the relief was moderate,	55
" " where there was no relief,	3
Longest time in which it has been continuously administered to the patient,	14 $\frac{3}{4}$ hours
Average duration of administration to each patient, about,	1 " "
Number of cases which have been terminated by the forceps,	17
" " of craniotomy,	1
" " turning,	1
" " first labor,	88

Number of cases of still-born children (in 13 labors),	14
“ “ flooding,	7
“ “ inflammation, recovered,	5
“ “ “ died,	1
“ “ bad health, succeeding the confinement,	25

An examination of the details which Dr. B. furnishes, will satisfactorily establish the fact that neither the death of the child nor the cases of inflammation, nor flooding, nor of bad health succeeding the confinement, can, with the slightest degree of probability be ascribed to the use of chloroform.

We shall quote freely from Dr. Burwell's descriptions of the effects of chloroform upon the symptoms and progress of labor, and append some comments of our own:—

“First, of its effects upon the mental faculties.—In a large proportion of the cases, chloroform was not given so freely as more than momentarily to obliterate them. The patients may be said to have remained sensible during the whole time of its administration. In some this sensibility was acute and lively, while in others, although they afterwards asserted that they knew everything which occurred, even to the birth of the child, they lay in such a quiet, drowsy condition, that frequently at the time I thought them insensible. I use the term insensibility here in reference to the condition of the mind and senses, and not in reference to the existence of pain. When in the first condition, they always declared their relief; called for more chloroform as the pain was coming on; frequently said when they had enough to benumb the pain; and even occasionally held the sponge themselves to breath of; and thus continued until the birth of the children. In the second condition, they laid in the intervals of pain more as if asleep, always waked out of it, of course, by the recurrence of pain. When the pain had passed off, I have often heard such declarations as “How delightful!” “How easy I am!” “What a relief!” &c. If I was careful to repeat the inhalation before every pain, it was not often asked for; but if I neglected it, it would very soon be inquired for.

“A condition of mind often connected and alternating with the state just described is delirium. This has indicated a degree of anæsthesia, sufficient, while it continued, to cause insensibility to pain, and to take away all recollection of the labor. It varied much in different cases, amounting in some cases only to a little muttering, where I could only occasionally catch a well articulated word; in others there would be a distinct pronunciation of words and sentences. The subject was almost always foreign to anything which would naturally have suggested itself, and it was almost always one of an unpleasant nature—something which excited grief, and occasionally tears. One fancied that her husband was in confinement; another, that her child would be killed; one was disposed to be hysterical and to weep; another was greatly grieved that a friend she wished to see was not present, nor would assurances, that the person she was calling for was with her, seem to satisfy her. One who was taken with pain prematurely, from fright the day before, got while riding, was fancying continually that the horses were just about to run, and spoke of their acting badly, kicking, putting their ears back, &c. These ideas would keep in her mind continually, when under the influence of the chloroform. Three or four times

the subject has been pleasant. One patient only, a very amiable woman, as far as I know, was made exceedingly cross and petulant by it; so much so, that on this account alone I discontinued it, but resumed it at her solicitation, after she had become again sensible to pain. I have never in any case, seen any delirium sufficiently violent to require a suspension of the remedy; never any raving or violent hysterical symptoms; never any symptoms of coma or stertor.

"An anomaly connected with the condition of the mental faculties, difficult to understand, and of great importance as it seems to me, is the entire loss of all recollection of the labor, almost from the first inhalation of chloroform, and yet during labor perfect sensibility as to the condition of the mental faculties and senses, and perfect sensibility not only to the existence of pain, but also to the relief derived from the chloroform itself."

There is a happy point in the use of chloroform in midwifery, not attainable in many subjects, but which we always aim to secure if possible, viz., insensibility to pain while mental consciousness is retained. The patient hears, sees, and speaks; and she is conscious that the process of labor is going on, but she has no perception of the pain which usually attends this process. Dr. Burwell details four cases illustrative of this condition, and of the fact, which we have frequently, we perhaps might say generally, observed, that after the effects of the chloroform have passed off, the patient is oblivious of what occurred while under its influence. Dr. B. appends the following useful caution—

"These cases seem to me to be very important, from the difficulty and uncertainty in judging correctly of the actual condition of the patient, and, of course, of the propriety of giving more chloroform. If accidents are to occur in the use of chloroform in midwifery, it will be, most likely, in such cases as these, from urging the remedy, under a false impression of the actual condition of the patient as to sensibility and intelligence.

"*Second.—Of the effect of chloroform upon the cries of pain.*—The prevailing idea is, and naturally enough, too, that if chloroform relieves pain, the cries of pain ought also to cease. But, as will be inferred from what has already been said, this is by no means the case, and we should be following a very dangerous guide did we depend upon them to determine whether or not the patient was sensible of her pain. Their existence is certainly an indication of suffering on the part of the system; but the cases given show that the mind does not necessarily take cognizance of them, nor will there necessarily remain any recollection of them afterwards. They, then, are not good guides; for were we to depend upon them alone, and, because they existed, suppose our patient needed more chloroform, we would at once be in danger of giving an overdose, and possibly a dangerous one.

"Nevertheless, chloroform does, in almost all cases, greatly subdue and lessen these cries or expressions of pain; and when this effect is being produced, we may be confident of our patient's relief, even if there be no other signs by which to judge of it.

"In a few instances, when administered freely, I have seen it quiet every expression and manifestation of pain.

"No prediction can safely be made in any particular case as to the precise effect the chloroform will have upon the cries of pain.

*“Third.—Of the effect of chloroform upon the muscular system.—*We see in labor two kinds of muscular action; first, that connected directly with the birth of the child, consisting of contractions of the uterine and accessory muscles, or those concerned in what is called a regular bearing down pain; second, a restlessness whenever a pain is on, seen in some cases, and which often defies all control. The patient cannot or will not lie still, but turns from side to side; throws her arms about; draws up or extends her limbs, and seems to have no power of obeying us when we give the triple order to lie still, keep in the breath, and bear down. Neither of these varieties of muscular effort do I ever try, as such, to control with chloroform: I want the full effect of the first kind of muscular action, and am afraid to give chloroform enough to quiet the second. I am anxious to have my patients exert themselves in any real expulsive effort; and I am gratified to find that chloroform, given in moderate doses, will afford in such a large majority of cases so much, and often such entire relief from pain, and at the same time scarcely interfere with the regular muscular contractions. The efforts will be the same, and their repetition as frequent as without its use.

“Given in large doses, I have in a few cases seen all use of the voluntary muscles prevented, and the children born by the contractions of the uterus alone. It has been very interesting to notice, in such cases, with what force the children have been thrown into the world. It really lessens one’s ideas (in some cases at least) of the value of the accessory muscles.

“In some of the cases, there has been no doubt of the fact, that the moderate use of chloroform has had the effect of lengthening the intervals between the pains, and rendering them less expulsive. One case I have seen where this was so markedly the case as to lead to its discontinuance. I think I could have put off the labor the whole day by it. The patient was with twins, and had not slept of any consequence for nine days, on account of great pain from extreme distension of the abdomen, and inability to lie down. The result was, that the moment she got any relief, she fell into a snoring, apoplectic kind of sleep. This has been the only case I have seen of any decided or continued retardation of labor from the use of chloroform.”

Complete anæsthesia will undoubtedly cause a total suspension of voluntary muscular contraction. In some cases, even uterine contractions are partially or wholly suspended, but these cases are exceptional. In passing, we will remark that it is very doubtful as to the amount of efficient aid rendered by the voluntary muscles. Every obstetrician must have observed how very frequently the voluntary efforts of the patient defeat the end by inducing a premature exhaustion, an inertia, before these efforts could be rendered at all effective. Chloroform most certainly produces a suspension of voluntary action, rendered by the “accessory muscles.” But in how large a proportion of cases the labor is retarded thereby, is doubtful. M. Caseaux has, more clearly than any other writer, explained the phenomena which seem to have puzzled Dr. Burwell, as well as many others, as regards the facility and rapidity with which the foetus is expelled while the action of the muscles, under the control of the will, is suspended. The “accessory muscles” of parturition are identical with those of respiration, viz., those of the chest, the diaphragm, and the abdomen. While, then, respiration con-

tinues, these muscles contribute, more or less, effectively to facilitate the expulsion of the contents of the uterus. But the question, whether the use of chloroform delays or accelerates labor, is sometimes one of capital moment relative to the life of the mother or child. In some the labor is retarded. The annihilation of the voluntary efforts will delay the labor in some cases, although not in all. Hence we have established for ourself the rule not to use chloroform, in face or breech presentations, where it is probable that the labor will terminate spontaneously, because the danger to the child in these presentations is proportionate to the length of the labor. While we admit, as undoubtedly true, that the direct effect of chloroform upon the child is entirely nugatory, we think that its life may be jeopardized in certain cases, from its influence in protracting the labor.

We were surprised to see that in 180 cases of midwifery, in which chloroform was used, Dr. Burwell did not meet with a single case in which its use promoted the dilatation of the os uteri and perineum, and increased the secretions from the vagina. The experience of M. Caseaux confirms this observation, and M. Villeneuve, of Marseilles, reports a case in which very extensive laceration of the perineum occurred while the patient was under the influence of chloroform. But most who have had any considerable experience in its use have come to a different result. In our own practice we have several times seen the soft parts very rapidly relax after the inhalation of chloroform, where the rigidity of these parts had previously constituted the great obstacle to the immediate termination of the labor. In more than one case we have seen it completed without assistance where the chloroform was used as a preparation for forceps delivery. In a patient of Dr. J. D. Green's, which we saw, the cervix had fully dilated, the waters had been discharged, and the head had descended to the floor of the perineum. But no farther progress was made, owing to the rigidity of the perineum. The pains were urgent and very frequent, and the patient, after continuing over five hours in this state, had become extremely impatient and irritable. The vagina was hot and dry, and so extremely tender to the touch that a sufficient vaginal examination was obtained with difficulty. Symptoms of nervous exhaustion were now exhibited to such a degree that it was decided to deliver by forceps, after she had been brought under the influence of chloroform. But as soon as the anæsthetic effect was obtained, the character of the pains changed, the heat and dryness of the vagina disappeared, the perineum at once relaxed, and the head was delivered within five minutes. We have several times observed similar results.

After describing the effects which he has observed of chloroform upon the pulse and respiration, Dr. Burwell says:

"I would here remark that I have not unfrequently noticed this irregularity and slowness of the respiration as an effect of chloroform, and it has almost always been coincident with the production of total anæsthesia. On perceiving it, I have always at once discontinued its further inhalation. While having thus frequently noticed this effect upon the respiration, I have, as already stated, never known (with the one exception) a marked rise or fall, or other alteration of the normal character of the pulse during its administration. And, furthermore, in every case of these irregularities of respiration, I have noticed the pulse to be perfectly natural in force, fulness, and regularity of beat.

"From the consideration of these facts, I look upon the breathing as a

better guide in the use of the remedy than the pulse ; and I am governed much more by it. An examination of the reports of fatal cases, as seen in the medical journals, will show that when the pulse has been noticed to fail, the patient has generally died. Any approach, then, to this effect, should by all means be avoided ; and I think my observations have been numerous enough to establish the fact of an alteration in the frequency, or regularity, or rhythm of the breathing, as almost uniformly to precede an alteration or failing of the pulse. I can easily imagine how, under the influence of an overpowering dose, the respiration and pulse may give out almost simultaneously, so that no precedence can be given to one over the other ; but my remarks here are all predicated upon its cautious use in the small doses I have ever been accustomed to administer it."

With Dr. Burwell, we have been accustomed to regard the breathing as a better guide in the use of chloroform than the pulse. In a paper, also published in the "Monthly Journal" for September, 1853, by Mr. Bickersteth, of Liverpool, on the mode of death from the inhalation of chloroform, he states, as his opinion, from experiments he has performed on animals, and from the observation of cases in which chloroform nearly proved fatal, when inhaled for the purpose of producing anæsthesia, that death begins at the lungs and that the cessation of the heart's action is secondary. But this was not the fact in, at least, three fatal cases. In a recent interview with Dr. Park, of New Haven, we learned that in a fatal case which occurred in his practice, where the chloroform was inhaled to prevent pain from the extraction of the fangs of a tooth, the pulse suddenly flagged, and then almost instantly stopped. The heart ceased to beat, but breathing continued for several minutes. In the London Lancet, a case is reported where death followed the inhalation of chloroform in a patient of Mr. Quain on whom he was about to operate for strangulated femoral hernia. Respiration continued after the pulse had ceased to beat. This was also the fact in the fatal case occurring to Dr. Dunsmere, Surgeon to the Royal Infirmary, of Edinburgh. The truth is, both the pulse and respiration should be closely watched during the inhalation of chloroform. In midwifery practice it is rarely necessary to induce perfect sopor, and hence it may be given with less hesitation than in a surgical operation.

As regards its safety in midwifery, we append some remarks of Professor Murphy.

"We have endeavored to show you very briefly, that the safety of the mother and her offspring are not compromised by the judicious inhalation of chloroform. For a more full discussion of these objections, I can only refer you to the tract already alluded to, as I must now draw to a conclusion ; but I cannot do so without expressing my deep regret, that the use of chloroform in midwifery is still surrounded by such a halo of prejudice that even eminent authorities cannot look at it through any other medium. How else can we explain the absurdity of describing the sopor of chloroform as intoxication, of speaking of 'the intoxicating properties of chloroform,' of informing women that they might probably be made 'dead drunk,' or must certainly be reduced to that condition which the law designates 'drunk and incapable?' Such objections as these are quite unworthy of the objectors ; not only because they are untrue and give an erroneous representation of the physiological phenomena that take place, but because they betray great want of knowledge of the properties of the agent that is

objected to. They are, in fact, rather appeals to prejudice than reason, and may be placed in the same category with other and more disgusting assertions, which have been made with regard to the ramblings of parturient women in the transition stage.

"Alcohol and chloroform are both hydrocarbons, so is hydrocyanic acid; they all affect the same tissues, and in a similar manner, but differ *toto cœlo* in the degree and rapidity of the effect; each have a transition stage—the stage of intoxication; with hydrocyanic acid it does not last a second; with chloroform, only a few minutes; with alcohol, it remains for hours. The sopor of chloroform may be caused without any excitement; the sleep of drunkenness never can.

"But to place this difference before you in a clearer light, I shall place the properties of these two hydrocarbons, chloroform and alcohol, side by side.

Chloroform.

1. Slightly soluble in serum.
2. Very slightly stimulating.
3. A most powerful sedative even in small doses.
4. The effects rapidly disappear.
5. Most powerful when inhaled.
6. Comparatively slight effect when administered by the stomach.
7. No alteration in the appearance of the brain, in cases where it has caused death rapidly.

Alcohol.

1. Soluble to any extent.
2. Highly stimulating.
3. No sedative effect until taken in large quantities.
4. Its effects continue for hours..
5. Least powerful when inhaled.
6. Effects most powerful when taken into the stomach.
7. Apoplectic congestion of the brain where it has been fatal.

"From this parallel you perceive that the agency of chloroform and alcohol on the constitution are altogether different; that chloroform does not intoxicate in the sense that the term is used in this objection, but that the exciting stage is very short, merely transient to the sopor that succeeds. The sleep of chloroform is totally different from the sleep of drunkenness—the one passes away with the vapor and leaves the patient as perfectly herself as she was before; the other continues so long as the blood is charged with alcohol; and even when consciousness returns, the effects of alcohol require a long time before they disappear.

"Having thus explained the properties of chloroform, its effects on the constitution, its advantages and disadvantages; having also considered the objections offered to its use, I shall conclude by briefly enumerating the points we have considered:—

"1. Chloroform does not paralyze the uterus, although from its influence on the excitomotor nerves, when the full dose is given, its action may be for a time suspended.

"2. Chloroform has no effect on the life of the child.

"3. Chloroform, when judiciously given, has no effect on the life of the mother.

"(a.) When given by the mouth, so as to influence the sentient nerves, it could not cause death, because it is not sufficiently powerful to act upon either the respiratory or the ganglionic nerves.

"(b.) When given in the full dose to produce sopor, it will not cause death, unless the quantity given is so concentrated as either to paralyze the

heart's action, or the pneumo-gastric and other respiratory nerves. A fatal result must be the consequence of a want either of attention or knowledge.

"4. Chloroform does not leave any morbid after-effects, in the great majority of cases where it is given; but it must be remembered that chloroform, like other powerful medicines, may act injuriously on certain constitutions, and hence the importance of a careful inquiry into such cases.

"5. Chloroform produces the most beneficial after-effects in cases where there had been intense suffering during labor, because it obviates the nervous irritation, the constitutional shock that is the result of long-continued and very severe pain.

"6. We may add, that its too-powerful effect may be obviated by fanning the patient, dashing the face with cold water, applying the vapor of ammonia to the nostrils. These remedies, however, are intended to stimulate the excitor nerves, they cannot therefore have any effect if these nerves lose their power. In such cases, artificial respiration has been found by Dr. Snow to be useful, not by pumping air into the lungs, but rather by pumping the vapor out of them, and allowing atmospheric air to enter by exciting inspirations."

It would give us pleasure to copy Dr. Burwell's rules for the use of chloroform in midwifery, with the dose and mode of administration; but our limits will only permit us to give the indications for its use as laid down by M. Charles Bernard:

"Chloroform is especially indicated,

"1. In very nervous women, in order to calm the excessive agitation and intellectual disturbance which parturition often causes in them.

"2. In those in whom labor appears to be suspended or notably retarded by pain caused by antecedent disease or by certain accidents, such as vomiting, cramp, violent colics, compression of the sciatic nerve, &c.

"3. To abate irregular and partial contractions, which, notwithstanding the atrocious and almost constant pain which they excite, do not at all advance labor.

"4. In the spasmodic retraction and rigidity of the neck of the uterus.

"5. In eclampsia."

SURGERY AND SURGICAL PATHOLOGY.

Amputation of the Tongue. Speech preserved. By M. MAISONNEUVE.

The amputation of a considerable portion of the tongue, in cases of cancerous affections of that organ, which had for a long time been almost entirely pretermitted, has, in our day, been again introduced into practice, either by means of excision, or by means of the ligature. In the case here reported by M. Maisonneuve, one of the most distinguished surgeons of the French capital, and which we translate from the *Gazette des Hôpitaux*, the preference was very properly given to a method of excision. The cancer, which was of an epithelial nature, occupied the anterior half of the organ. The surgeon divided the soft and osseous parts of the chin, and was thus enabled to operate with ease upon the tongue, a considerable portion of which, as well as of the sublingual gland, was removed. The case presents two remarkable peculiarities: the cause of the affection, in the first place, and in the second place, the complete recovery of speech; the latter, probably to be accounted for by the superficial nature of the affection, which

had spared the deep parts, and gives reason to hope that the patient will escape the dangers of a relapse. Here are the facts, as related by Dr. Maisonneuve :

" Dr. J., corresponding member of the Academy of Medicine, and President of the Committee of Vaccination, had been for several years in the habit of sending to the departments liquid vaccine-matter, preserved in small tubes. The matter was put up by himself, and, as a consequence, he had been in the habit of holding a certain number of glass tubes in his mouth. The sharp points of the glass induced punctures on the tongue, frequently followed by small pimples. The pimples would generally disappear in a few days; but, in time, an induration supervened, and became, by its persistence, the origin of a grave disease. In fact, tormented by the persistence of the induration, Mr. J. endeavored to remove it by cauterization. He first employed nitrate of silver; then, acid nitrate of mercury; but this medication aggravated the disease, instead of arresting its progress. Epidermic tubercles were developed all over the surface of the tongue, and subsequently a profound ulceration invaded the central part of the organ. By the advice of friends, he submitted to the energetic cautery of red hot iron; an operation which had the effect of giving still greater activity to the disease. All the anterior part of the tongue, nearly as far as the calciform papillæ, became the seat of a considerable ulceration, of one inch in length; while at the same time, the central ulcer was making rapid progress. To these symptoms were soon added lancinating pains, which entirely deprived the patient of rest. He consulted Dr. Ricord, who submitted him to the iodide of potassium. Despite this treatment, the disease gained daily; the tongue, enormously tumefied, ended by obstructing the buccal cavity; the efflux of saliva was continuous; speech became impossible, and the patient was compelled to restrict himself to liquid aliments. It was in these conditions, that, by the advice of Dr. Ricord, the patient came and consulted me. In the presence of a disease of such gravity, against which the most rational medication had been found powerless, I believed myself justified in proposing amputation as the only resource. It was performed on the twenty-fourth of August, at Dr. Pinel's *Maison de Sante*, in the presence of Drs. Larrey, Ricord, Richard, Dumolet, Lauglebert and Pinel. The patient having been submitted to chloroform, I first incised, on the median line, the lower lip and the soft parts of the chin. Next, with a chain saw, I made the section of the lower jaw; the two branches of which being thus separated, I was enabled to grasp the tongue, and draw it out. By a rapid dissection, the diseased organ was then separated from the healthy parts, as far as beyond its anterior half and over an extent of one inch. The sublingual gland had also to be sacrificed. Ligatures were applied upon the important vessels, so as effectually to prevent hæmorrhage. After this operation, the branches of the jaw were brought together, and maintained in contact, by means of thread rolled round the incisor and canine teeth; the ligatures placed upon the vessels were directed under the chin, in the inferior angle of the chin; and the edges of the division were united by means of the twisted suture. Notwithstanding the extreme gravity of this operation, no accident was manifested. The union of the external parts was effected by first intention; the enormous loss of substance was rapidly repaired; the bones became consolidated; and, what is truly remarkable, forty days after the operation, the patient had recovered his speech, and at the same time,

the faculty of seizing and masticating his food. Anatomical examinations demonstrate that the affection belonged to the class of epithelial cancroïds. It may therefore be hoped that there will be no relapse."

"Extraordinary operation on the Subclavian Vein, by the Mate of a Vessel; Recovery.—The following narrative is given to show the value of self-control and common sense in scenes of danger, and the resources of nature under the most desperate circumstances. The merest chance in the world elicited the simple and child-like narrative from the operator; and he seemed as much astonished as ourself, when the almost certain character of his performance was pointed out to him on a preparation of the heart and blood-vessels. Edward T. Hinckley, of Wareham, Mass., then mate of the barque Andrews, commanded by James L. Nye, of Sandwich, Mass., sailed, some two years and a half since (we find the date omitted in our minutes), from New-Bedford, Mass., on a whaling voyage. When off the Gallipagos Islands, one of the hands, who had shown a mutinous disposition, attacked Captain Nye with some violence, in consequence of a reproof given him for disobedience. In the scuffle which ensued, a wound was inflicted with a knife, commencing at the angle of the jaw, and dividing the skin and superficial tissues of the left side of the neck, down to the middle of the clavicle, under which the point of the knife went. It was done in broad day, in presence of the greater part of the crew; and Mr. Hinckley, the mate, being so near that he was at that moment rushing to the captain's assistance. Instantly seizing the villain, and handing him over to the crew, the knife either fell or was drawn by some one present, and a frightful gush of *dark* blood welled up from the wound, as the captain fell upon the deck. Mr. Hinckley immediately thrust his fingers into the wound, and endeavored to catch the bleeding vessel: with the thumb against the clavicle as a point of action, and gripping, as he expressed it to me, "all between," he found the bleeding nearly cease. The whole affair was so sudden that, Mr. Hinckley stated to me, he was completely at a loss what step to take. Such had been the violence of the hæmorrhage, a space on the deck fully as large as a barrel head being covered with blood in a few seconds, that it was evident, from that and the consequent faintness, that the captain would instantly die should he remove his fingers from the bleeding vessel. As Mr. H. said to me, with the simplicity and straightforward style of a seaman, 'I brought to for a minute, to think over the matter. The bleeding coming upwards from under the collar-bone, and being completely concealed by it, it was plain enough that I could'n't get at the blood-vessel, without sawing the bone in two; and this I would not like to have tried, even if I had dared to remove my fingers. Feeling that my fingers' ends were so deep as to be below the bone, and yet the bleeding having stopped, I passed them a little further downwards, still keeping up the pressure against the bone with the middle joints. I then found my fingers passed under something running in the same course with the bone; this I slowly endeavored to draw up out of the wound, so as to see if it was not the blood-vessel. Finding it give a little, I slowly pulled it up with one finger: *when I was pulling it up, the captain groaned terribly*; but I went on, because I knew I could do nothing else. As soon as I could see it, I washed away the blood, and was astonished and very glad to see there were two vessels, as I supposed them to be, one behind the other:

the cut was in the front one. It was the full breadth of the knife, or about half an inch, and neither across nor lengthways, but about between the two, and went about half its thickness through the blood-vessel: *it was smooth and blue* in appearance; and the cut had stopped bleeding, as I supposed at the time, because the vessel was pressed together by being stretched across my finger. As I had often sewed up cuts in the flesh, and knew nothing about tying blood-vessels, and supposed that was only done when they were cut in two, as in amputated limbs, I concluded to try my hand at sewing it up; so I took five little stitches: they were very near together, for the wound was certainly not half an inch wide, if so much. I twisted the ends together loosely, so as to make one large one, and let it hang out of the wound over the bone; then I closed all up with stitches and plasters. On the fourteenth day I found the strings loose in the wound, from which matter had freely come: it healed up like any other cut.'

"The practical anatomist and surgeon will at once see the internal evidence of the entire truthfulness of this extraordinary narrative, and the certainty that Mr. Hinckley must have closed up a wound in the subclavian vein. Aside from the position of the wound rendering any other explanation impossible, and the color and amount of blood instantly lost, the fact that a wound of the subclavian artery must have been followed by aneurism, if not instant death, renders the conviction unavoidable that it must have been the vein. Indeed, it is impossible to suppose, aside from Mr. Hinckley's high character and the corroboration of the log-book, that such a story could have been devised by any but a surgeon of decided practical ability. We may be mistaken in our views of its importance, but we think that in the estimation of our professional readers we have placed upon record one of the most extraordinary circumstances in the whole history of surgery."—(Scalpel.)

PRACTICAL MEDICINE AND MEDICAL PATHOLOGY.

Certain signs indicating the commencement of pulmonary phthisis; by
M. BOURDON.

Every one knows how difficult it is to determine the presence of pulmonary tubercles, in the commencement of the disease, and how uncertain are stethoscopic signs. They may not be present, when the lung contains a large number of tubercles; they may exist when it does not; they may be masked by various sounds. General symptoms furnish no sure means of revealing the diagnosis; a simple catarrh may be attended by very severe symptoms, whilst a true phthisis may produce but a slight effect upon the system.

On the other hand, it is in the commencement of the malady, when the diagnosis is most difficult, that it is most important that it be understood, because at this time the opportunity exists of acting with the most success. M. Bourdon has sought to throw light on this obscure point of science. Impressed for a long time with the frequency of certain symptoms in patients affected by phthisis, he studied them with care in order to establish their true value as signs. These symptoms are arranged under several heads,

according to the organs in which they are manifested. 1. Gastric symptoms. 2. Hepatic symptoms. 3. Thoracic pains.

1. Gastric symptoms must not be confounded with the morbid phenomena which are observed in nearly all diseases. Those which are coincident with the commencement of phthisis, are nausea, vomitings, epigastric pains, and dyspepsia. We must not expect to meet them in all patients; nevertheless they are extremely frequent, since M. Bourdon has found them in more than two thirds of the subjects; some phthisical patients have experienced but one; in others, on the contrary, they are variously combined. Nausea and vomiting are the most frequent; they are generally manifested after coughing. But it must be said, however, that their frequency and intensity, are by no means proportionate to the severity of the cough; they occur in fasting as well as after eating. In general, the vomitings are composed of mucous secretions; they are rarely bilious. On the other hand, if they manifest themselves in a large number of tuberculous patients, they do not appear with any regularity except in a very small number of cases.

Another very common symptom is epigastric pain. In the greatest number of cases it is accompanied by vomitings and nausea; however, it may also appear without these. With a majority of patients it is manifested only on pressure; or it is so slight that it is necessary to call their attention to it, in order to make them sensible of its presence; with a few it is developed spontaneously. Although it shows itself as well before as after eating, it is, however, after the ingestion of food that it is the most commonly observed. Dyspepsia quite persistent, without nausea or vomiting, has been observed in a certain number of cases. Frequently, these gastric symptoms precede thoracic; but more frequently, perhaps, they are manifested either at the same time as the latter, or may occur afterwards. Are they due to a lesion of the stomach? This is a question whose solution has occupied the attention of the author. Frequently he has found the stomach healthy, more frequently it has presented some lesion, the most frequent being a peculiar mammillated condition of the mucous membrane. He is inclined to think that the pressure exerted by the enlarged bronchial ganglia upon the pneumogastric apparatus, may contribute to these affections of the stomach.

2. The liver has also presented remarkable peculiarities. In half of the cases examined by M. Bourdon, there was increase of size, accompanied often with pain. This increased volume, appears above all to have manifested itself in the right lobe; the consistency of the organ does not undergo any change. Lesion of sensibility is less frequent than changes in volume. Spontaneous pains are rare; in nearly all cases, they appear only on pressure or after some harsh or prolonged movements.

In a very small number of cases only, do we find this increase of sensibility without change of size.

As to the change which the liver may undergo, autopsies have shown that in more than half the cases examined, it consists in a fatty degeneration, more or less advanced; in a majority of cases the bile is more dense and more highly colored.

3. Most phthisical patients experience pain between the shoulders, and upon the sides of the chest: besides these spontaneous pains, there are others to which M. Bourdon calls the attention of physicians, and which are revealed only upon percussion. The points where this pain may be developed are quite numerous; it is generally observed, however, under the clavicle.

This pain exists only on the side affected by tubercles ; if both lungs are invaded, it attacks the side which is most affected. This has been observed in all periods of the disease. As to the cause of this pain, M. Bourdon is inclined to refer it, like M. Beau, to an intercostal neuritis.

The legitimate conclusions which M. Bourdon derives from his researches are the following. When a prolonged dyspepsia is observed, accompanied by nausea and vomitings for which no cause can be assigned, or even an abnormal development of the liver without disease of the heart, or inflammation of the liver ; when these phenomena are perceived to manifest themselves independently of any other affection, or in the course of chlorosis, or after measles, or typhus fever,—the physician should suspect tuberculous affection, should examine the patient with care, and even when he has doubts of its existence should act as if he was convinced of its presence, or at least use every necessary precaution.—(Archives Générales de Médecine, April, 1853.)

PART IV.—HOSPITAL RECORDS.

The Medical Institutions of the United States.—It is our intention to give, from time to time, a succinct historical account of the several Hospitals, Dispensaries, and Schools of Medicine in the Union, embracing all those statistical details with which it is desirable and expedient that the profession at large should be familiarly acquainted. In the execution of this design, we shall require some assistance ; and we now solicit, from all who may possess it, such information as will enable us to render these articles as complete and satisfactory as possible. It is not intended to observe any strict order as respects either priority of establishment or locality, but simply to make use of the data as they come to hand, and are considered sufficiently comprehensive.

All communications and printed documents bearing on this subject, from this and other cities, addressed to the Editor, at the office of this Journal, No. 7 Park Place, will be thankfully acknowledged and freely used for the purpose in view.

From the documents and information already in our possession, we have prepared for the press, and shall publish in our next issue, the first article of this proposed series, being an account of the New York City Hospital, the oldest and most known of the institutions of this city.

We have caused to be printed and distributed to the several City Hospitals and Dispensaries, and the State Institutions in the neighborhood, blank forms, of a tabular character, to be filled up from their daily proceedings, showing the number and nature of the cases treated in them, with special reference to age, sex, place of nativity, occupation, temperament, diathesis,

disease and its complications, with the result of treatment and marked pathological conditions. From these we anticipate to be able to prepare quarterly, abstract statements of a most important statistical character connected with endemic, epidemic, and sporadic disease, and surgical lesions, as well as the evidence of climatic influence, one column being appropriated to the length of residence of foreigners in this country.

Such a record, if faithfully kept and carefully prepared, will form a basis of calculation and argument of great value to the medical philosopher in considering the etiology of general or special disease. To the resident physicians and surgeons of the several hospitals, and the ordinary attendants of those establishments which do not receive interns, we look for aid in this useful and interesting work, being well assured that the profession will appreciate the trouble they must necessarily take to provide the desired information. Nor will their efforts in so good a cause be without advantage to themselves personally. The credit due to the compilers of these tables will be manifest in their publication, and establish a reputation for careful and scientific investigation, calculated to create confidence in their professional acquirements and experience; and the habit of methodical notation thus acquired, will enable them to enter the arena of more extended professional engagements with an advantage none but those so trained possess, but the want of which many have to deplore. It is matter of daily experience to all that a great amount of valuable knowledge is lost to the practitioner and student, from the neglect to render permanent, by written record, the knowledge of the phenomena which present themselves in the observation of disease, under the various and mutable circumstances of climate, constitution, and local or casual agencies.

From the courtesy with which our proposal has been met, and the assurances of compliance we have received, we confidently expect to make these tables an attractive portion of our publication, and good evidence of the industry and talent of our rising men.

The atmospheric condition, as exhibited by meteorological observations during the past seven weeks, was somewhat more variable than during the same period of time in 1852, although the total number of clear and mild days has been larger. The types of disease prevailing have been of the usual character observed at this season, although perhaps somewhat more asthenic. Several fatal cases of cholera have been recently reported, and this has naturally enough given rise to apprehension, in the public mind, that it will become epidemic. On this subject, we append the following pertinent remarks of the "Daily Times":—

"During the year 1851, and until May of 1852, there was not a case of cholera reported, though no one doubts that men occasionally died here,

during that time, with symptoms which would have passed for true cholera in a cholera season. Physicians, knowing very well what an inflammable material the public is made of, and how hawk-eyed are their brethren in detecting an error of diagnosis, are not accustomed to call a fatal disease cholera while cholera is not prevalent, however willing some among them might be to hide their own blundering treatment, during its prevalence, under its formidable name. Now, the fact that physicians return it as a cause for death, without a note of explanation, or any hesitation whatever, discovers, first, that nothing but a different condition of the atmosphere is necessary to develop cholera as an epidemic here, and, second, that it has so familiarized itself by its presence, that we may safely expect no precautionary measures will be adopted for our protection.

"Critical, indeed, is our present condition. Whatever may be the cause of cholera, we see it steadily marching toward us. We find none to doubt that by next summer our coast will intercept its career. Meanwhile, the city is in most excellent condition to welcome the foe of our race. The steam of our piles of street dirt attract it as the smoke of tall chimneys is said to draw lightning, or the stench of a carcase the vulture. Our best streets are miserable dirty, our worst are incomparably foul. No one is ignorant of it, none doubt the attraction of dirt for every such disease. Yet the city lies quiet, like an open keg of powder with the lighted torch only a foot above it. Down the sides of the torch the ashes fall, and sprinkle the powder as with hoar frost. A coal falls, but it strikes by the edge, which has been dampened. The public servants look up from their soup and their wine, and think "something ought to be done;" but as the explosion has not come yet, they begin to doubt if powder will burn when fire touches it, and so eat and drink, and pocket the people's money, and do nothing to save us.

"We should do something towards turning away the torch. We should institute instant measures of protection against the pest-houses that almost daily reach Quarantine; clean the ships, give more room for emigrants, give them wholesome food and facilities for cooking, and to officers power to enforce those regulations which experience and humanity dictate. The press, enlightened public sentiment, and patriotic ship-owners can do very much towards this; our State Legislature and Congress can do much more. But nothing, probably, can prevent the coming of the plague. We should, then, do all possible to guard ourselves. In the city, garbage and dirt of all sorts should be removed at once, while the weather, unseasonably pleasant as it is, favors the removal. Inspectors should be instructed to report every nuisance at once, overcrowded tenements should be thinned out, and the surplus tenants cared for by the public until they can properly care for themselves. The markets should be put in order, suspicious meats be sub-

ject to close inspection, and every violator of the laws regarding the public weal in this respect punished with exemplary severity."

It becomes clearly the duty of every practitioner to exercise the influence he possesses in his immediate circle of social and professional connection, to advocate and enforce all such prophylactic measures as are calculated to arrest the progress or mitigate the violence of the disease should it appear among us. Much may be effected by judicious management of the household on sound hygienic principles, and no rational being will object to be guided in this respect by the advice of his physician.

In the New York City Hospital there has been a considerable amount of interesting disease, but, at the same time, a paucity of cases requiring special comment. Dr. Agnew reports a case presenting some peculiar features and connections. A patient was admitted with a bleeding ulcer at the flexure of the left arm. Venesection had been performed seven months previous to her admission, for some affection under which she was at that time laboring. The puncture had at first healed, and remained closed for about a month, when it ulcerated and bled. On admission, the lips of the ulcer were found callous and pouting, and surrounded by a thickened condition of the integumental and cellular tissues. The patient was chlorotic and suffering from amenorrhea. She had menstruated but once since the infliction of the wound. The fore-arm was flexed on the arm at an angle of 45°. The hæmorrhage from the ulcer had occurred at irregular intervals, was generally venous in its character, but occasionally assumed an arterial hue and impulse. Many efforts had been made to arrest the hæmorrhage by compresses, escharotics, and other styptics; but no attention would seem to have been given to the derangement of the uterine functions. On consultation, it was determined to cut down and explore the condition of the diseased parts. The median basilic was found healthy and continuous; it was cut and tied at both ends. The wound was left open, and measures taken to promote granulation from the bottom. The iodide of iron was administered internally. One week after the operation, the patient menstruated. The arm was kept in proper position by splints. One or two slight bleedings occurred from the wound during the progress of cure. The patient menstruated a second time at the natural period, and was discharged cured on the sixtieth day. Two months afterwards she was reädmited, the cicatrix having again ulcerated, but there had been no recurrence of hæmorrhage. The arm was again flexed, and the wound looked as unhealthily as formerly. The arm was straightened, and splints adjusted; the ulcer treated with cold dressing. Thirty-five days after admission, she was seized with an acute attack of ovaritis, which after a few days yielded to treatment. The wound has recently bled two or three times, and she has not menstruated since her admission. In thirty days she was again

discharged, with the ulcer healed and the functions restored. The interesting points connected with this case, are the apparent connection existing between the hæmorrhage from the ulcer and the absence of menstruation; and the obstinacy of the diseased action in the part involved in this vicarious flux. It is no less remarkable, that another patient from the same part of the country, and under the care of the same medical man, was admitted during the same period, with a similar ill-conditioned ulcer resulting from the puncture of venesection; but in this latter case there was no reason to suppose the hæmorrhage from the ulcer to be vicarious, as the uterine functions were normal.

At Ward's Island we have been much interested with the success which has attended the employment of cod-liver oil in the marasmus of immigrant infants, induced by the want of proper nourishment, and unhealthy atmosphere during the Atlantic voyage, this condition being exhibited as well among the children born in the vessels as in those who were carried on board healthy at the port of embarkation. The oil is given to the youngest, in quantities as large as the stomach will bear, in combination with brandy and milk. Many little ones have been thus rescued from apparently impending dissolution. Pneumonia has been very prevalent among the infants, but has yielded kindly to treatment. The autopsy of fatal cases has shewn the disease to be more frequently lobar than lobular. Intermittent fever has also obtained to a great extent among very young infants, seventeen cases being reported during the last month, one of which, only, proved fatal. Dr. H. G. Cox, who has the medical charge of this department, has confirmed the remarkable tolerance with which very young infants bear the administration of quinine, no less than *sixteen grains* being given in the twenty-four hours for several days, to patients of six weeks and two months old, with the happiest results. We saw an interesting case of paralysis from dentition, in a stout and otherwise healthy child: she was quite hemiplegic for some time, but is now recovering, under stimulant frictions to the spine, and encouragement to use the affected extremities. Puerperal fever has frequently visited the obstetric wards, and compelled the physician to change the locality of his patients. On each occasion the removal was attended by a cessation of the disease. The wards are now, however, free from this appalling malady. The treatment pursued has been the old-established one of a combination of calomel and opium, with local blood-letting, with a very satisfactory amount of success, without resorting to the heroic doses of opium which we have read and heard of as being administered.

In the surgical department of this noble institution we have been struck with the great variety of lesions, and the large number of cases under treatment. It is one of the most extensive fields of surgical study on this continent. Purulent ophthalmia among children has presented a formidable array of cases.

The general strumous character of the patients, contracting the disease under the depreciating influence of long sea-voyages in crowded ships, with indifferent and insufficient nourishment and clothing, aggravates the disease to a frightful degree; and the majority of the cases exhibit more or less structural disorganization. The result of constitutional treatment, with judicious dietetic management, has been attended with the most favorable issue, the local treatment being of the simplest palliative description. There is a well-marked case of distichiasis in the ophthalmic ward—the double row of lashes being very distinct and complete, the under row inclining very strongly inwards and keeping up a severe degree of irritation. The mode of treatment pursued by Professor Carnochan in morbus coxarius, has been very successful. He relies principally on constitutional treatment, abandons the use of splints and confinement, permitting and encouraging the use and motion of the affected side, and allowing the abscess to open spontaneously. The number of cases now in progress of convalescence, the general improvement in the physical appearance of the patients, and the absence of the distressing hectic, indicate the soundness of the principle upon which he proceeds.

There was a well-marked case of extensive dissecting abscess of the cellular tissue of the lower extremity. The muscles of the lower third of the thigh, the leg, the ankle, and dorsum of the foot, entirely denuded of integument and separated from one another, exhibited a truly frightful appearance, and precluded the hope of a favorable termination. The patient was sent in from the medical wards, where he had been the subject of fever; and the progress of the disease has been most rapid. There is also an interesting case of spontaneous gangrene of both lower extremities, in a man of middle age. We have been unable to trace the history of the case, or to account for the cause.

The number of victims of Pott's disease, of all ages, is by no means the least interesting feature of practice to be seen here. With these also, the principal direction is given to constitutional treatment; rest and counter-irritation of a mild character being the adjuvant means employed. There is also, in the convalescent ward, a case in which resection of the carpal ends of the radius and ulna, and the first row of carpal bones, has been accomplished, with much benefit to the patient, and with very complete conservation of the power of grasp and traction, and of effective motion of the wrist. Three good stumps, after amputation at various points in the thigh, by double flap, seem to attract the attention of the visiting student, and deservedly so. In one case, union took place completely by first intention.

From the Orthopedic Institution, under the direction of Drs. Bauer and Barthelmess, we have been supplied with a statistical return of cases treated by them, since the opening of their Institution in August last. An analysis of these tables will be given in the next number, our pages being so completely preoccupied as to prevent a more extended notice at present.

PART V.—EDITORIAL.**SALUTATORY.**

THE conductors of the *AMERICAN MEDICAL MONTHLY*, in presenting another periodical to the profession, believe they are called upon to express their opinion of the character and standing of the profession of this country, their own aims in engaging in this new enterprise, and the means available for their accomplishment.

The Medical Profession, in every age and country, must receive a strong impress from the times and the people. Composed, as it is, of men who are constantly mingling with the public, and who necessarily become conversant with the intimate life of all classes, it acquires and displays a strong resemblance to the national and social peculiarities of those classes and that public. Its philosophy must accord with that which prevails in other departments at the same period. Much of the contempt which has been so lavishly bestowed upon medicine during the dark ages, so called, belongs not to that science, but to the condition of its contemporaneous philosophy. The natural sciences were then in their infancy, if, indeed, they were at all known; and, hence, no adequate basis for the advancement of medicine yet existed; still, all the sources of progress and advancement were confined to, and the only evidence of energy was displayed by, medical men. It is true, Aristotle had bound them down to his own peculiar tenets; although it may be saying little enough to assert that medical men were certainly as free as other classes of educated people, from the chains by which that master-mind kept the intellect of the age in bondage. But the period of emancipation arrived, and among the earliest and most prominent to claim the largest liberty were those versed in the medical lore of the times.

A more recent example will also illustrate this point. During that curious delusion concerning witchcraft, which in the latter part of the 17th century overran not only a portion of our republic, with such sad effects, but also England and Scotland, it is pleasant to reflect that a physician raised his voice, and boldly used his pen against the errors into which clergymen and magistrates, as well as the people, were so blindly falling. What, if he may have been imbued to some extent with the vagaries of the day! He was prompt to follow any glimmering of light, and feared not to publish and maintain his convictions.

So it is also with national peculiarities: they will mark the physician as indelibly as other classes, their effects being modified only by the difference of pursuit; for in the quiet walks of science we are not to expect the same developments as in the busy excitement of political and social commotions.

In our estimate of national characteristics of the medical profession, we shall not wander far from the truth if we designate the French as earnest, indefatigable, brilliant, and acute ; the English as stable, slow to change, studious, and withal dogmatical ; the Scotch as quick, practical, and diligent ; the Irish, as inventive, active, and thorough ; the Germans, as patient, persevering, accurate, and minute. And thus we might continue to characterize the profession of every nation by features which would sufficiently distinguish each from the rest. But it is the medical profession of our own country with which we now have to do.

Composed as our nation is of the descendants of almost all the European peoples, and constantly receiving accessions, not only of middling, but of eminent professional talent, it would seem, at first glance, as if our profession must present an incongruous combination, held together by no principle, and bound by no common tie. Still, there is a very close resemblance, in all respects, throughout all parts of our land. The Medical Journals which are now issued in every part of the Union, except the new States which border on the Pacific ocean, bear full and constant proof of this similarity. Untrammelled in all other respects, mind learns to throw off a forced adherence to dogmatic teachings, and to follow its own convictions of the truth.

It is not uncommon to hear words of disparagement uttered against our medical literature. These have been pronounced *ex cathedrâ* by our national association, and have carried with them all the weight of the highly intelligent committees of that learned body. But has not an error been committed by assuming as perfect a certain standard (perhaps that of the English periodicals) and attributing every difference to inferiority ; while forgetting the variations which become necessary from our different circumstances ? It cannot be expected, that the practitioner engaged in the active discharge of his duties in the newer portions of this new country, however great his opportunities of observation may be, and how perfect soever his appreciation of his advantages in this respect, should write with the same polish and adornment, that would grace the articles of him who can command leisure, and embrace all the facilities afforded by a vicinage to Guy's or l'Hotel Dieu. Yet, all things considered, the difference is not very remarkable. An acquaintance of some years with this kind of literature, has led to the conviction that our national profession has good reason to be proud of its contributions to medical knowledge. These may not exhibit the exhausting learning of the Germans, which leaves nothing unreferred to, or be garnished with the brilliant and profuse experimentation of the French ; but there is a certain directness, a going to the point at once without circumlocution, which is far more acceptable to one whose time is precious, whose mind is probably preoccupied with the anxieties of practice, and who is compelled to obtain with rapidity the information he requires.

The day has passed when American books were disregarded. The productions of our writers are now frequently transferred to foreign journals; American opinions and American authors are quoted, and made the subject of fair, and oftentimes flattering criticisms.

We have dwelt thus on our medical literature, because we have felt that justice required us to do so, and because it is one means of expression of the character of the American medical profession. We shall recur to it in a subsequent portion of this article, in connection with another topic.

We have said that, notwithstanding the various origin of the individuals composing the medical community of this country, and the different circumstances in which they are placed as to climate and customs, a great resemblance is still observable among them. We hope to escape the charge of national vanity or individual egotism, if we attempt to portray justly and faithfully, what appear to us to be the leading features of their character.

The first striking point which presents itself for remark is a spirit of restless activity—we do not use the words in a bad sense—a quickness of inception and application. This is in a great measure common to the national character, and results, no doubt, from the multiplied means of rapid communication, the extent and variety of the resources upon which our energy is brought to bear, and the necessity of keeping pace with the knowledge, which, local it may be in its origin, speedily traverses the whole field of observing laborers, and incites investigation, as a means of preparation for its use. To illustrate this, we may refer to the epidemics of yellow and typhoid fever. An acquaintance with the first, not only theoretical but practical, is a matter of course with the physicians of the North, in view of its occasional visitation of the higher latitudes; whilst the latter had been diligently and fully studied by those of the South, long before it made its appearance among them. The wide range of different climates; the prolific cause of disease developed in the clearing up and settlement of new localities; the well-known influence of accumulated masses of people, and the changes brought about by the successive alterations which occur in their social condition, are phenomena of almost daily contemplation to us, and call for attention the more earnest and rapid, in proportion to the celerity with which they are made manifest. In this manner, the fruit of long periods of time and change, which call forth the reasoning and engage the learned research of the medical philosophers of older countries during their tardy maturation, must here be garnered with diligence and promptness, since it ripens so quickly.

The second peculiarity is a promptness of action and facility in putting into practice what is learned, which also arises, in part at least, from the habits of thought engendered by our political condition. If conviction of the truth of a proposition, is present to the mind of an upright and inde-

pendent man, he will immediately follow and act up to its teachings, without waiting for the words of another to authorize his course. When with entire liberty the mind is permitted to run over the whole range and theory of government, and, the rights of others being duly respected, no hindrance is offered to the practice of what is believed to be correct, it is natural and inevitable that the same course will be pursued in other subjects.

These appear to us to be the principal features of our national medical character. It was hardly to be expected that hitherto our system of medical instruction should be as perfectly organized and conducted as in European schools. But we may now justly claim for ourselves, even in this respect, a favorable comparison with them. To all their natural advantages many of our teachers have superadded a course of foreign instruction and travel. Our presses pour forth freely, at a price compatible with the means of almost all of our practitioners, the lore of other nations; while the accumulated experience of our own observers is also not wanting in importance. Our surgeons have performed some operations which claim to be unique both in kind and result. Our physicians have taught the possibility of successfully combating diseases heretofore regarded as incurable; and their published works are quoted with respect. That, on the other hand, we have defects as a profession, and those of a grave nature too, we freely acknowledge. To assert the contrary would be to say what has never been true of any body of men. To expose those defects is always painful, though sometimes necessary; to repair them is the especial province of the professional periodicals; and it is believed that the MONTHLY will be found to be an important assistant in this work.

It is time, and it is essential, that we should now assert and maintain a standard of excellence among ourselves. We shall be unjust to ourselves if we longer remain content with a second place; we shall be unwise if we make no effort to stand higher. Our numbers on this continent are now amply sufficient: there is no deficiency of talent; and the means of giving expression to our judgments are daily multiplying. The commendation of the American profession ought to be commendation enough, without the necessity of appealing to a jury of foreign critics; and its disapproval, while it should be slow and just, ought to be final. If we are wanting in public corporations to give weight and expression to this judgment, which, did they exist, would be only too fallible, it must be obtained at the bar of public professional opinion, uttered through its ordinary channels. Let us mature this opinion, by individually seeking to obtain more knowledge from the fields of observation and study so abundantly provided. We owe this to ourselves; we owe it to the country which has given us birth, or which has so generously received us to its bosom.

We now approach a point where it becomes necessary to speak of mat-

ters somewhat more personal, namely, our own enterprise. We say *somewhat* more personal, because we do not regard this publication as entirely the result of individual desire. It springs from a necessity very generally recognized and acknowledged. It is intended to obviate a reproach hitherto justly applied to this city, fast becoming the great centre of medical instruction and knowledge, as it already is of mercantile pursuits, commercial influence, and social wealth. While assuming this important and responsible position for this journal, we, however, cheerfully acknowledge the merit of those who have heretofore labored in this cause. But it seemed to those who have taken an active part in originating this periodical and in encouraging the effort for its commencement, that a larger and more comprehensive publication was necessary to fulfil the requirements of the profession at the present time. Several of our sister cities have for some years proved the practicability of successfully competing with the reprints of foreign journals, by sustaining the issue of publications which combine the features of original contributions, retrospective records of American medical science, and analytical synopses of foreign literature."

In the city of New York there are about one thousand practitioners of medicine. She has three medical schools, annually educating from six to seven hundred students; she possesses some of the largest and most admirably conducted hospital establishments in the Union; and is daily obtaining the supremacy in the field of general literature. Under the combination of such favorable conditions, it has been matter of surprise to the visitor, and a cause of regret to all who know how to estimate her wonderful and onward progress in all the elements calculated to bestow upon her the position of a metropolitan city, that so prominent a characteristic of scientific intelligence and zeal as such a journal should be wanting.

It may be regarded as a bold attempt on the part of the conductors of this periodical, to endeavor to fill this hiatus. They are fully sensible of the responsibility they have undertaken; nor are they unmindful of the severe criticism to which they thus voluntarily expose themselves. Due consideration has been bestowed upon these, as well as the ordinary difficulties to be overcome in undertakings of this kind. Conscious of their deficiencies, they have endeavored to nerve themselves for the encounter, to prepare themselves for the onerous duties they have assumed, and to make such arrangements as will enable them to overcome the obstacles they can foresee, or those which may present themselves from sources not now apparent.

The principal causes of the failure of numerous efforts which have been made hitherto in this direction, seem to have been the following, 1. A want of sufficient capital to commence upon a scale commensurate with the objects in view, and to sustain the cost of publication during the languid circulation of the earlier years of issue; 2d. The impracticability of secur-

ing a constant supply of material within the limits of one individual's professional connection and acquaintance ; and the absence of all inducements to exertions on the part of competent writers, in the circumscribed extent of circulation, and the fact that the proprietor of the publication was the only party benefitted by their labors ; 3dly. However well qualified the editor might be to undertake and fulfil all the functions required of him, it was impossible for one man to bestow the time necessary for the careful collaboration so essential to the complete arrangement of a monthly periodical, unless he made it the only business of his life—a circumstance not likely to occur, unless his financial success fully justified him in so doing, aside from the improbability that, however well prepared he might be on some, he would be equally familiar with all the departments of medical literature. Lastly, that when publications were commenced by individuals principally with the view of writing themselves into notoriety at the commencement of their professional career, no matter how successful and meritorious their efforts, their zeal flagged when they found an increasing practice engrossing their attention, or that the labor and time thus bestowed were either immunerative, or interfered with some other more lucrative occupation.

We shall doubtless be expected to indicate the course we contemplate adopting with reference to this periodical, in order to avoid these sources of failure ; as well as our means for accomplishing our purpose, of giving to the profession a medium for the interchange of information and opinion, for promoting the interests of medical science, for elevating the character of the medical profession, and establishing a record of American practice, observation, and progress.

1. A sufficient amount of capital has been secured to meet the contingent expenses of publication of a monthly issue of three thousand copies for several years, in any event. We can thus offer to subscribers a guaranty of its permanence so far as pecuniary means can insure it.

2. With the desire to elicit the contributions of authors of merit and experience, we insure a liberal and prompt remuneration for all articles accepted for our pages ; limited probably at first in accordance with our means, but to be increased in proportion to our success. We therefore invite all who wish to embrace the opportunity thus afforded, of bringing before the bar of public judgment the fruits of their observation and study, freely to transmit their manuscripts, with the confident assurance that they will obtain candid investigation and ready acceptance when found worthy of publication. In the exercise of the criticism which shall determine this point, every care will be taken to weigh well the intrinsic merit of the subject, as well as the literary excellence of the composition. Some indulgence will be required in the performance of this responsible and delicate duty ; but we rely upon the good sense of unsuccessful competitors to sus-

tain the editor in its performance, when they shall perceive that the importance or novelty of the articles selected justify his preference. We do not limit this invitation to particular places, or departments of medical science. In our enterprize we "know no East, no West, no North, no South." We seek to render the journal subservient to the interests and elevation of the profession throughout America, and therefore look for support in this endeavor from the United States and contiguous countries, and wish to include among the objects of investigation all the collateral branches of science which have a direct bearing upon the progress of the healing art. We therefore solicit a liberal exchange with our contemporaries in this and other parts of the world; believing that while we shall freely receive we shall as freely give interesting and profitable information. Careful attention will be bestowed upon the review of all recent publications which are brought under our notice, and this will be rendered a prominent characteristic of our enterprize. By a judicious subdivision of the labor of collaboration, we anticipate being also able to give a complete resumé of foreign as well as American medical progress. In furtherance of this part of our design, we have secured the services of gentlemen fully competent to select and translate the productions of the German, French, and other foreign medical periodicals; and each of the conductors will be responsible for his own department in this respect.

In all matters pertaining to the welfare of our public institutions, and the advancement of professional excellence and knowledge, we shall encourage free-discussion; recognizing, however, no sect, no party, but the duly educated and regularly qualified practitioner of medicine, and the zealous promoter of scientific truth. We believe that we have reason for congratulation that for the superintendence of the hospital department we have secured the services of a gentleman who is a writer of ability, a surgeon of knowledge and experience, a practiced lecturer, and a veteran journalist; thus bringing to our aid qualities especially adapted to appreciate the excellence of a clinical lecture, the skilfulness of an operator, or the wisdom of a mode of treatment. We therefore feel justified in announcing that this portion of the journal will be of unusual value—certainly this can only be prevented by obstacles which we cannot believe we have any reason to anticipate.

Such are our aims, and such are our means of accomplishing them—we stand above all party or sectional considerations; we shall labor for the good of our whole profession, and oppose whatever obstructs its advancement—both honestly and fearlessly, and so far as in us lies—and we therefore appeal to the profession for support.

THE AMERICAN MEDICAL MONTHLY.

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PART I.—ESSAYS, MONOGRAPHS, AND CASES.

Contributions to Aural Surgery. Polypi and Fungus of the Ear. By
EDWARD H. CLARKE, M. D., Boston, Mass.

MORBID growths in the ear-passages are of frequent occurrence. They are found in both sexes and at all ages. They vary in size, character, position, and appearance. Sometimes they are not larger than a small pea; and sometimes they completely fill up the external meatus, and even project into the cavity of the concha. They often consist almost entirely of epithelium cells, without any distinct fibrous tissue or envelope; and sometimes present the appearance of fibrous tissue, with only a slight intermingling of epithelium cells. Rarely, they are nothing more than cysts, which contain a little liquid; and still more rarely, are small, pedunculated, fleshy growths, which neither result from nor produce any discharge. Occasionally they are malignant in their character; but instances of malignant growths in the ear are exceptional. They may be found in any position—from the cavity of the tympanum, to the cerumenous glands—and may sprout from any of the tissues of the external, or middle ear. Their appearance is as various as their character, position, and size. They may be lobulated or smooth; pedunculated or with a large base; globular or elongated, or irregular.

At the present time I propose to consider only those growths which are of a non-malignant character.

These growths may be naturally divided into two classes, which I shall call polypus and fungus. The former term is used as indicative of distinct tumors, which may grow from any part of the external auditory meatus, and which are generally of an epithelial or fibrous character; while by fungus I understand what Dr. Wilde, of Dublin, in his late excellent work on Aural Surgery, describes as "those vascular and granular masses which generally grow either from diseased bone, or after the destruction, in whole or in part, of the membrana tympani, and the attachments of which are to be found principally at the very bottom of the auditory passage in the tympanum." *

The causes of polypus and fungus have not yet been fully determined. Any long-continued irritation in the ear, particularly otorrhœa, appears in a large majority of instances, to induce such growths. When a discharge from the ear is neglected for a considerable period, and purulent matter is allowed to accumulate in the meatus, so that its walls are constantly bathed with an offensive secretion, polypus or fungus is almost sure to sprout and grow. An appropriate nidus is thus prepared for their production, and they grow from it like weeds from rank soil. This, however, is not always the case. I have known polypus to take root and grow luxuriantly, where there had been no apparent antecedent disease. "Beneath the increased tendency to vegetations (*erhöhen vegetationsprozesse*) which leads to the production of polypus, there lies," says Martell Frank, "as the foundation, a certain inflammatory condition; hence, whatsoever may induce inflammation of the glandular tissue of the meatus, or catarrhal inflammation of that passage, may likewise generate polypus." †

Polypi of the ear have been variously classified by different authors. Some have described them according to their shape and outward appearance, as pear-like, globular, &c.; others according to their position, as polypi of the glandular tissue, of the membrana tympani, of the cavity of the tympanum, and the like. Others again have described them as the result or complication of some other disease; for example as one form of chronic inflammation of the glandular tissue. Practically, these various classifications are not of much use. If any classification is necessary, it would, perhaps, be best to employ one based on the microscopic characters of such growths. ‡

* Practical Observations on Aural Surgery, &c. By William R. Wilde, M. D., etc., etc., of Dublin. Eng. edition, p. 416.

† Martell Frank. *Erkenntniss und Behandlung der Ohrenkrankheiten*, s. 253.

‡ Mr. Wilde, in the work already cited, describes six varieties of polypi, viz: ovoid and attached by a peduncle; lobulated and friable and gelatinous; lobulated and fibrous and firmly attached; fibrous, with a large base and of an uniform surface; peariform, or pear-like; and malignant polypus. Mr. Toynbee, of London,

So far as I have noticed, polypi exhibit under the microscope three distinct characters. They consist either of epithelial cells, in process of development, mixed with a little fibrous tissue; or of fibrous tissue with some epithelial cells; or of cysts. The last form is rarely met with.

The first class, or epithelial growths, may occur in any part of the meatus; but, in a large majority of cases they are found in the glandular tissue. They are usually of a bright red color, and are highly vascular. After removal, however, the blood-vessels empty themselves, and the polypi partially collapse, and assume a white or grizzly look. They are not tender to the touch of a probe, except near the root; at this part they are often extremely sensitive. A slight touch frequently makes them bleed, and when extracted the root bleeds freely. They are sometimes attached by a broad base, and sometimes by a narrow one. They usually grow from the glandular tissue, but sometimes spring from the walls of the meatus, near the membrana tympani; they occasionally sprout from the sides or bottom of a sinus, or cul-de-sac, which has been eaten by ulceration into the long walls of the passage, or mastoid cells; and they sometimes grow from the cavity of the tympanum. Their shape and size are irregular—they may be long and smooth; or lobular, with deep furrows or sulci in them; or with various projections, like arms; or composed of one large, irregular mass. These are what are generally described by authors as gelatinous and vascular polypi. The only certain method of recognising them, is by an examination with the microscope. When thus examined, they exhibit small nucleated epithelial cells. These cells may be elongated, fusiform, or conical. The nuclei may be seen both isolated and crowded together in groups, and they are generally mixed with some fibrous tissue. The epithelial cells, however, largely predominate. The annexed drawing, made for me by my friend, Dr. John C. Dalton, jun., of New York, from a specimen under the microscope, gives an excellent idea of the microscopic characters of an epithelial polypus.

A fibrous polypus presents, externally, a somewhat different appearance

who has lately written a series of articles on polypi of the ear, in the London Medical Times, describes three varieties of polypus. The first is the vascular polypus, "of a red color, plentifully supplied by vessels, and so soft that, upon being taken hold of by a pair of dressing forceps, it breaks up, and blood escapes from the lacerated surface. It is composed of small, rounded cells, and its surface, which is sometimes covered by ciliated epithelium, is very smooth and shining." This is the same as what I have described as an epithelial polypus. The second variety is the gelatinous polypus, "a name given to it from the soft, jelly-like appearance presented by its free portions." Mr. Toynbee's third form is called the "globular, vascular polypus."

from an epithelial one. It is more regular in its form, apparently less vascular, and firmer to the touch. It does not usually bleed when touched,



Fig. I.—Epithelial cells of a polypus from the ear.

and when extracted the root bleeds moderately. It rarely attains to the size which an epithelial polypus often reaches. It is sometimes, though very rarely, attached to the membrana tympani, particularly along the course of the manubrium mallei. It more generally grows from some portion of the outer half of the meatus. I have never met with one which was rooted in the cavity of the tympanum. It is often semi-transparent, and does not collapse much after extraction. Examined under the microscope, its substance exhibits indistinct

fibrous tissue, and sometimes bundles of fine parallel fibres, with groups of nucleated fibres and nuclei, which precede the formation of fibrous tissue. Interspersed with these may be seen spindle-shaped cells, and some epithelial tissue. The following drawings (Figs. 2, 3, and 4), which were taken from

Fig. II.



Fig. IV.

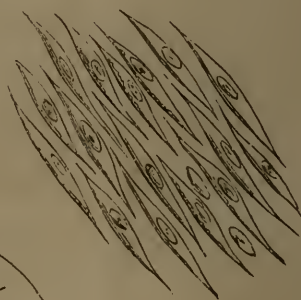


Fig. III.

Fig. II.—Fine parallel fibres of fibrous tissue, from a polypus of the ear.

“ *III.*—Spindle-shaped cells, and nuclei, from the same.

“ *IV.*—Group of these cells, from the same.

specimens examined for me by Dr. Dalton, of New York, and Dr. John Bacon, jun., of Boston, exhibit some of these appearances. Unlike an epithelial growth, some parts of a fibrous polypus often remain infiltrated with blood after extraction. The greater regularity of its form, firmness of consistence, and less vascular tint, serve to distinguish it from an epithelial polypus; but the microscope alone can determine to which class it belongs.

Another characteristic of polypi is, a strong tendency to reproduce themselves after extraction. It is frequently a matter of great difficulty to prevent a polypus which has been excised, from growing afresh from the root. In this respect, however, there is a marked difference between the two classes above mentioned. An epithelial growth has an inveterate tendency to reproduction; whereas, a fibrous one is often eradicated by simple excision. I do not yet possess observations enough, to make this statement absolutely. But up to the present time, I do not find among my notes a single instance of a fibrous polypus which has reappeared, after the growth has been excised and its root once cauterized. Epithelial growths, on the contrary, have in most cases required active and persevering treatment to destroy them. If future observations should prove that a fibrous polypus in the ear is not readily reproduced, while an epithelial one sprouts luxuriantly from the root, an important practical fact is added to our knowledge of these growths.

The third class of morbid growths to which I have alluded are denominated cysts. They are usually small tumors, elastic to the feel, spherical, and attached by a narrow neck.

Their interior is filled with a reddish fluid, which contains blood-corpuscles and epithelial cells and nuclei, in every stage of development. These cysts are not sensitive to the touch of a probe, and do not bleed easily when touched. They are generally attached to the external third of the meatus, and grow from the dermal or glandular tissue. They are composed of two membranes, an outer or investing membrane, and an inner or lining one. They can be removed with ease by some of the means hereafter described. They appear to be in a considerable degree independent of any antecedent disease, and may, or may not be complicated with deafness. The two previous kinds of polypi are accompanied with otorrhœa, and *sometimes* are the cause of it. Cysts rarely produce any discharge from the ear. Like fibrous polypi, when removed and the root cauterized, they do not readily grow again.

The otorrhœa, to which I have just referred, is one of the most disagreeable attendants upon polypoid growths. It is of a muco-purulent character, often offensive, and always disagreeable to the patient and to others. It varies in amount, from a slight and occasional running to a copious and constant discharge. It may proceed from the polypus itself,

or from the adjacent parts which are irritated by it. Of course, all attempts to arrest the discharge are unavailing, excepting those which lead to the extirpation of the polypus. It should be borne in mind, however, that a polypus is often the result of a neglected otorrhœa, and consequently that the destruction of the growth is only one step towards the arrest of the discharge.

Fungus growths are frequently to be met with at the bottom of the auditory passage, and in the cavity of the tympanum. Like polypus, they are usually the result of a neglected running from the ear. Their microscopic characters resemble those of an epithelial polypus. They are, however, more irregular in shape, break and bleed more readily when touched, and are more highly vascular. Attempts to remove them directly by the aid of instruments are usually fruitless; for they break and give way in the grasp of the instrument itself. They resemble what the French call "vegetations charnues." They sometimes may be seen growing from the bony parts of the meatus, when caries has taken place, and also sprouting from any fissure, or ragged ulcer that exists in the ear. Their more common position is in the cavity of the tympanum, when the membrana tympani has been destroyed. There they may be seen, pushing their vascular heads through the perforation of the membrane (which always exists in these cases), like a crop of mushrooms from a decayed trunk.

The degree of deafness which accompanies polypus and fungus of the ear is variable. It is sometimes so great as to amount to complete cophosis, and sometimes so slight as to interfere very little with the patient's convenience. In most cases, however, it is decided. The loss of hearing is in proportion to the extent of disease. If the membrana tympani is uninjured, and the polypus grows from the external portion of the meatus, and has not existed for any length of time, the sense of hearing is not much interfered with. When an opposite state of things exists, and the tissues of the ear as well as the membrana tympani are diseased, there is marked, though rarely entire deafness; and the removal of the polypus will not remove the deafness.

The prognosis in these affections, like the degree of deafness, is variable. When a polypus grows from the dermal or glandular tissue of the meatus, and particularly when it is of a fibrous character, the prognosis is in every way favorable. When, however, polypus or fungus grows from the periosteum, or from diseased bone, or from the cavity of the tympanum, or from the mastoid cells, the prognosis is doubtful. The gravity of it increases in proportion to the character and extent of the disease with which the polypus is complicated.

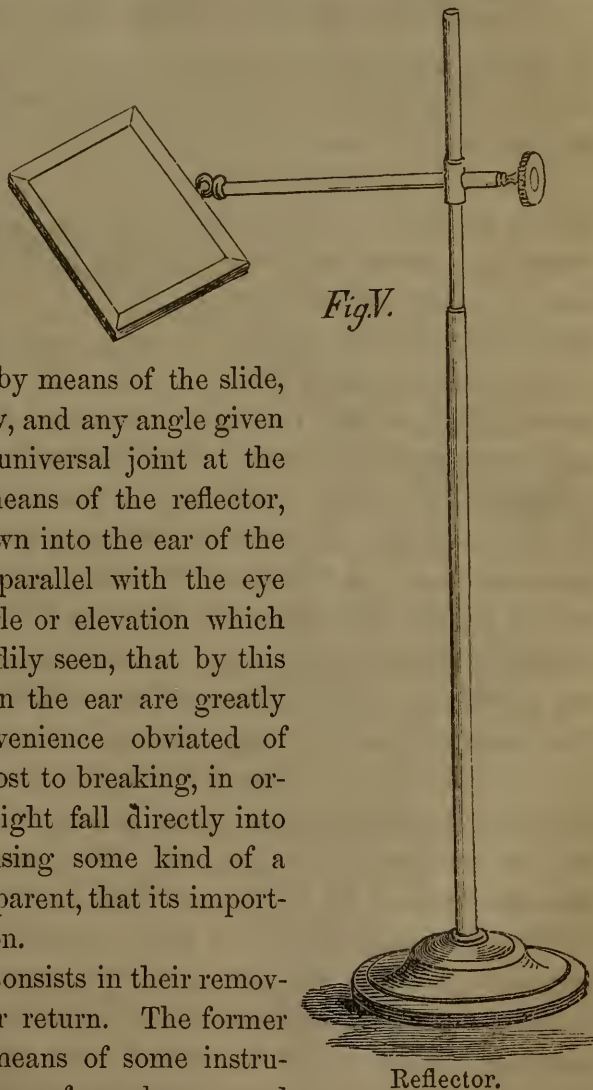
Let us now pass to the treatment of these growths.

The first and indispensable step towards any safe and judicious treatment

of them consists in obtaining a distinct view of the growths themselves. For this purpose nothing can take the place of clear sunlight. The light of a cloudy day is not sufficient; and no artificial light that I have yet seen, can be used as a substitute for the sun's rays. The syringe, probe, and speculum, must likewise be used, as circumstances may direct, to clean the auditory passage, to bring it into view, and to feel of the growth. In order to obtain the utmost possible assistance from the sun, I am in the habit of employing a "reflector," such as is herewith represented in Fig. V. It consists of a wooden base, rendered massive by the addition of lead, an upright standard, a projecting arm, and a mirror. The mirror is attached, by a universal joint, to the arm, and the arm is attached, by a slide, to the standard. The mirror may thus be elevated, or lowered, by means of the slide, which is fastened with a screw, and any angle given to the reflected rays by the universal joint at the extremity of the arm. By means of the reflector, the rays of sunlight are thrown into the ear of the patient, in a direction either parallel with the eye of the operator, or at any angle or elevation which he may wish. It will be readily seen, that by this simple means, operations upon the ear are greatly facilitated; and the inconvenience obviated of bending a patient's neck almost to breaking, in order to make the rays of sunlight fall directly into the ear. The necessity of using some kind of a speculum for the ear is so apparent, that its importance need not be insisted upon.

The treatment of polypi consists in their removal, and the prevention of their return. The former should be accomplished by means of some instrument, adapted to the extraction of a polypus; and the latter, by means of caustics and astringent washes. It is not necessary to notice all the various instruments that have been invented and used for this purpose. I shall content myself by simply noticing two or three, which are the best.

Before describing them, however, let me remark that it is well to use, for a few days, before attempting the removal of a polypus, some astringent



solution. This will contract and harden the growth, and render it much less likely to break up when seized. A solution of alum, or of the acetate of lead, or of the sulphate of copper, or of tannin, may be used for this purpose. Usually, I select the acetate of lead, and direct a solution of this salt, of the strength of 10 or 12 grains to the ounce, to be instilled into the meatus 2 or 3 times a day, for several days. When, however, the polypus is firm to the touch and does not readily bleed, its removal may be attempted at once.

A modification of the wire snare which was first proposed by Mr. Wilde, of Dublin, and the polypus forceps of Mr. Toynbee, are the two best instruments of the kind with which I am acquainted. I have not yet met with a polypus which I could not remove with one or the other of them.

The wire snare of Mr.

Wilde (with the modifications I have introduced) consists of a wire, a steel bar, a slide and ratchet, with a convenient handle. The steel

bar is $5\frac{1}{2}$ inches long; $2\frac{1}{2}$ inches of its length are square, and the remainder is round. The slide and ratchet are adapted to the square portion of the bar. The slide is moved backwards and forwards by means of a trigger, and fixed in any desired position by the ratchet. The square portion of the bar is $\frac{1}{6}$ of an inch square. Its smallest extremity is $\frac{1}{16}$ of an inch in diameter. A cap $\frac{1}{2}$ to $\frac{3}{8}$ of an inch in diameter, covers this extremity. Two holes are made through the cap, one on each side of the bar. Through these holes a delicate silver or steel wire is passed, in such a way as to form a loop of any required size beyond the cap. The free ends of the wire are fastened to the slide, which may be moved and fixed in any position. A handle is fastened to the largest extremity of the bar at right angles with its length. A simple inspection of the annexed figure will give a better idea of the instrument than any description. The difference between this instrument and Mr. Wilde's consists in the handle, which is placed at right angles with the bar so as not to obstruct the light, and in the slide with the ratchet and trigger. The essential character of the instrument, however, is the same with that of Mr. Wilde. The application and advantage of it is apparent. The loop of wire can, by a little manipulation, be passed beyond and around a polypus which cannot

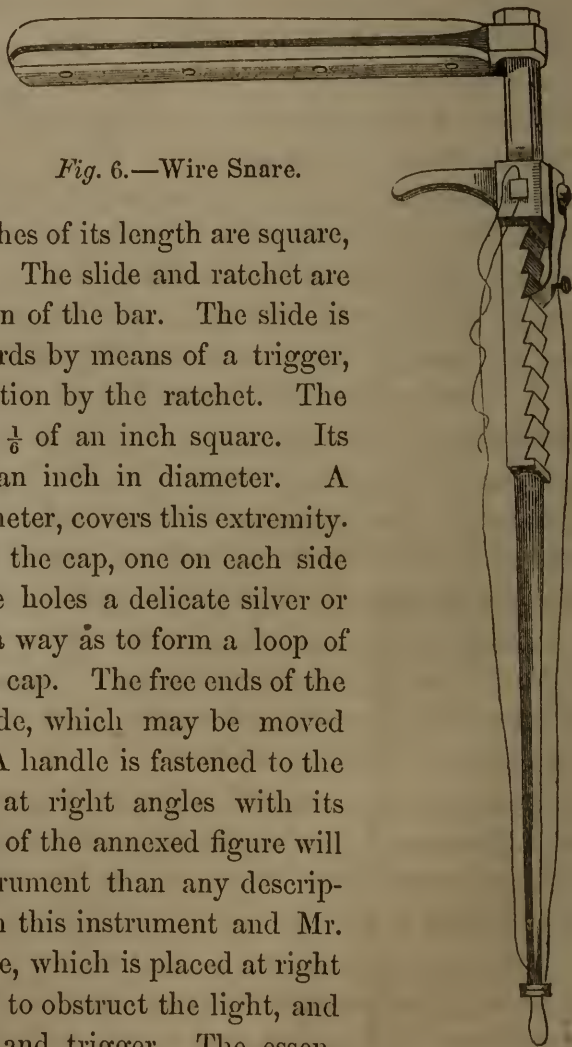


Fig. 6.—Wire Snare.

be readily grasped by other instruments. As soon as the polypus is so surrounded, the trigger is pulled back, and the growth is completely ensnared. When the polypus is thus within the grasp of the instrument, it may be torn out by pulling the whole instrument, polypus and all, out of the ear, or it may be excised. Excision is accomplished by pulling the trigger with the slide back, while the bar remains fixed. In this case, the wire acts the part of a circular cutting instrument, and the cap at the extremity prevents the growth from slipping out of the loop of wire. This instrument is an exceedingly ingenious one, and much credit is due to Mr. Wilde for its invention.

Polypi which cannot be readily extracted by the wire snare, can be seized and torn

out by the polypus forceps of Mr. Toynbee, which are represented in figure 7. The construction of

the instrument is apparent from the figure. The two blades of the forceps are enclosed by a long slide. When pressure is made upon the button at A, the force is transmitted through the handle to the slide at B. When the slide is thus pushed down, the blades at C are firmly closed. This instrument is convenient for the purpose of grasping polypi of small or moderate size, which are attached to any part of the meatus or membrana tympani. Polypi of larger size are more easily extracted by the snare. With these two instruments in his possession, the aurist will not find much difficulty in taking from the ear any kind of morbid growths.

The bleeding which follows the extraction of a polypus is not copious. As soon as it has ceased, the root should be thoroughly and deeply cauterized. The caustic which I have used for this purpose with the most success, is the solid nitrate of silver. Mr. Toynbee recommends the *potassa fusa*, or the *potassa cum calce*. But I have been

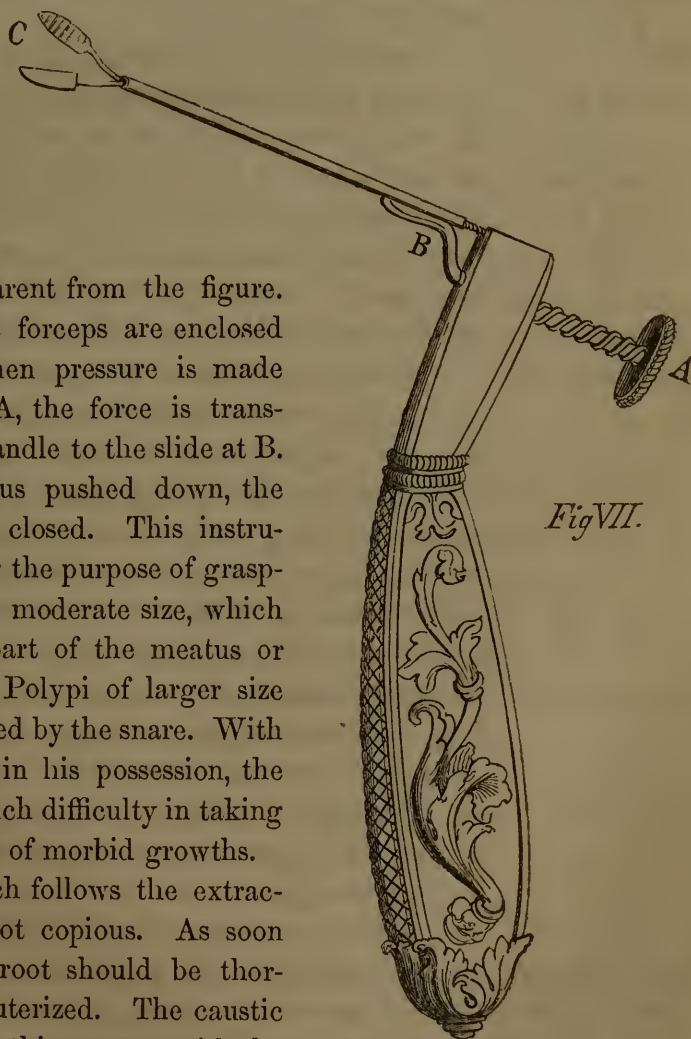


Fig VII.

Mr. Toynbee's Polypus Forceps.

unwilling to introduce into the ear a caustic which is so violent in its action and deliquesces so rapidly as caustic potash. The nitrate of silver may be very easily applied by means of the following simple instrument, represented in



Fig. VIII

Fig. 8. It consists merely of a piece of platina wire, inserted into a handle. The free extremity of the wire is made rough, or perforated with small holes, so as to prevent the caustic from slipping off. Nitrate of silver can be easily fused around this point, and moulded to any size that the operator may desire. A piece of silver coin may be used upon which to melt the caustic. By this simple caustic holder, nitrate of silver can be readily applied to any part of the meatus. If the operator desires to do so, he can bend the wire so as to facilitate his manipulations.

By the aid of this instrument, or by some other means, the root of the polypus should be thoroughly cauterized. In many instances, the disposition to reproduction is obstinate, and can be overcome only by great perseverance on the part of both the patient and the surgeon. I have sometimes found it necessary, for the eradication of a polypus, to employ a curved bistoury, and divide the tissues from which the polypus sprung, by a crucial incision, and then to thrust the caustic in every direction into the divided parts. The caustic should be applied every second or third day, until the tendency to reproduction is overcome. At the same time, while this treatment is going on, the meatus should be kept scrupulously clean. For this purpose, nothing is so good as frequent syringing with tepid water. It is likewise important to instil into the passage several times a day some astringent wash. Solutions of the acetate of lead, of tannin, of alum, and of the sulphate of copper, may all be used with advantage. The application of caustic and the use of any wash, should be discontinued as soon as the polypus ceases to reappear. Sometimes, though rarely, this treatment causes pain. If the pain is slight, it may be disregarded: but if it is severe, or long continued, it is well to put a blister behind the ear, or to apply one or two leeches to the orifice of the meatus. It is occasionally necessary to keep a blister open for some little

Porte Caustique
for the Ear.

time. The after treatment, which I have described, is much more important after the extraction of epithelial polypi, than after those of a fibrous character.

The treatment of fungus growths differs in one particular essentially,

from that of polypi. It is not well to attempt the destruction of the former by extraction. When seized by an instrument, they break up under its grasp; so that only the portion grasped can be torn away. Moreover, the bleeding surface grows more rapidly after it has been torn than before it was meddled with. They should be freely touched with caustic, either in solution or in solid form, every two or three days, while daily instillations of astringent washes are employed. A solution of caustic can be more conveniently applied by means of fine cotton, on a delicate pair of bent forceps, than by a camel's-hair brush. Almost any strength may be used. When the vegetations are luxuriant, a solution of nitrate of silver of the strength of from 50 to 100 grains to the ounce is not too strong. When they are delicate and smaller, resembling somewhat a congested mucous membrane, a strength of from 10 to 30 grains to the ounce is sufficient.

It is important for the practitioner to remember, that fungoid growths and polypi may be either a purely local disease, or they may depend upon some constitutional taint. In the former case, a local treatment alone, such as I have just indicated, is sufficient; in the latter case, constitutional treatment must be likewise attended to. If the patient is of a scrofulous diathesis, chalybeates or preparations of iodine, like the iodide of potassium, should be exhibited. When the root of a polypus reaches down to, or springs from the periosteum, I have found the iodide of potassium of great advantage in hastening the cure. When the patient is of plethoric make, mild alteratives, like the blue pill combined with rhubarb, or some other gentle cathartic, should be given occasionally. When caries of the bone exists, the same general treatment should be instituted that caries demands in any other part of the body. If there is any reason to suspect that polypus growths are connected with the internal ear, or complicated with any cerebral disease, the treatment previously indicated should be used with extreme caution, if at all. Very grave results may follow meddling with a polypus that implicates the brain. There are always symptoms, however, of a suspicious character, to warn the surgeon of any such complication. If no such symptoms are present, active treatment for the removal of polypus may be safely instituted. And, indeed, an urgent reason for commencing this treatment, is the fact that a neglected polypus may lead to fatal disease of the brain.

It was my intention to append several cases of polypus and fungus, in illustration of these remarks; but the length which this article has already attained, precludes me from doing so. This must be reserved for another occasion.

PARACENTESIS THORACIS.

An analysis of twenty-five cases of Pleuritic Effusion, in which this operation was performed. By HENRY I. BOWDITCH, M. D., one of the Physicians of the Massachusetts General Hospital, and Member of the Societies for Medical Observation at Paris and Boston.

[Continued from Vol. I., No. 1, p. 34.]

Case 25.—Sept. 28, 1853. I saw at S., in consultation. He had been ill from March, and particularly so from July, with acute pains in the left side at this latter period. His symptoms were those of pleurisy, following tubercular disease. He had cavernous respiration at the upper part of the left lung in front. The heart was not dislocated, and it had a strong thrill with each pulsation. The lower half of the back was quite dull, with absence of respiration, a broncho-ægophonic vocal resonance. Notwithstanding the cavernous respiration and the non-dislocation of the heart, I was disposed to regard part of the symptoms—dyspnœa and œdema, &c.—as, in a measure, caused by an effusion, to a small amount. I proposed, therefore, a puncture, although satisfied that serious tubercular disease existed at the apex of the lungs.

Oct. 1.—Having tested still further the existence of fluid, by a change of posture, I punctured a little outside of the line from the angle of the scapula. No fluid could be obtained—and I desisted. The patient suffered no inconvenience. I would mention, that before operating I stated that such might be the result, and that if any fluid came it might not give relief, but that, considering all the signs, I should advise that the operation should be done. No subsequent evil resulted from it. It may be asked, why no fluid was obtained. The answer is difficult. Such an event has happened before—vide cases 5 and 6, also once in case 9. I think it very probable the lung was punctured. The case is interesting as showing the innocuousness of the operation, whatever may have been the nature of the case.

Case 26.—Sept. 12, 1853. Mr. —, I saw in consultation. Æt. 60. He was a gentleman well known in political life, and of a very active temperament. He had been ill from February. He had had cough for some weeks, but never pain in the side—nor dyspnœa. He had had hæmoptysis slight, in the early part of the disease. From the first, he had felt that he should die, and, therefore, was unwilling to use remedies. When I saw him, his mind had become very dull, and he lay most of the time without speaking or eating. Pulse, 80 to 100. For several days he had taken little

food. There was dulness at the right back, and less murmur throughout same side. The dulness changed with the position of the patient. At the bottom of the right back there was a prominence, feeling solid, but elastic, and separating the ribs. It resembled the lobule of a scirrhus mass, but there was no discoloration of the superficies. I advised the puncture, feeling that it was the sole chance of possibly relieving him. Great objection was made to it for several days. Finally, I was requested to see him again. I then, for the first time, knew of the existence of the tumor. He was so much sunken, and the prospect that combined with the pleurisy there was malignant disease, the knowledge that the patient himself was opposed to all attempts to cure him, determined me not to operate: I therefore declined.

Following* is a tabular statement of the prominent features of all the cases I have had under my own charge since April, 1850, with a few treated by others, and which I saw in consultation.

From this tabular statement we see that—

First, No one of the patients operated on experienced a single dangerous symptom, or any materially unpleasant symptom, except for a short period.

Second, Out of twenty-five persons, only three failed of obtaining relief. Of these three, two had had lung, probably tubercular, disease; and from the other no fluid could be drawn, owing, perhaps, to an imperfection of the instrument which I used in my earlier operations.

Third, In more than half of the cases, the puncture was the first remedial agent, that decidedly arrested the progress of the disease. This it did in two modes. 1st, by allowing the lung to expand immediately, and producing thereby a rapid cure. 2d, by so stimulating the functions of the body, made torpid by long disease, that they immediately, sprang into healthful, vigorous action, while the lung expanded more slowly. Cases 7, 14, 15, 18, 20, 21 are illustrations of the first, and 1, 8, 11, 12, 22 of the second class.

That this stimulus which I have mentioned as occurring in the second class, actually takes place in many cases, I am sure. I have so repeatedly noticed it that I now confidently hope for its occurrence, when I do not find that a case, after a puncture, is likely to be of the first class. I do not mean to state that the stimulus shows itself immediately, or that it acts with rapidity in every case, but simply that from the moment of drawing off the fluid, I have been able to trace a series of favorable influences tending towards health.

Fourth, In about *seven-eighths* of the cases, the operation has given *great*

* See pp. 104—108.

relief to prominent and distressing symptoms, insomuch that the patients have asked for a second, third, or fourth puncture, as a means of relief only.

Symptoms Consequent on the Puncture.

These were very similar to those reported in my former paper. The pain of the puncture was the chief trouble, and this, as it was momentary, was but little noticed by the majority. Stricture across the chest was occasionally noticed towards the end of the operation. The cough was augmented in many. This I regarded as a favorable sign, as it usually indicates that the compressed lung is beginning to expand. In one case this symptom was excessive, it having lasted twenty-four hours almost without intermission. In this case the lung arose instantly from its compression. One had vomiting of her dinner, the operation having been done in the afternoon. In all, where fluid was obtained, the oppression was somewhat relieved; in one, impending suffocation was prevented. Most of the patients were exhilarated by the success of the operation, as in our previous set of cases. In one, there was a slight oozing of blood from the point of puncture, which, however, was easily checked.

The *pulse* remained tranquil, as much as it was before the operation.

The *digestive* functions were improved. In all, where much fluid was obtained the appetite was improved with singular rapidity. One person asked for food before we left the house.

The *urine* was augmented frequently by the operation, a fact which I noticed often when analyzing the first set of cases.

In *none* was the fever augmented, or a febrile paroxysm excited.

The physical signs altered slowly in some cases, in others very rapidly. The patient in case 15, having been ill a few weeks, presented the phenomenon of the lung completely expanded and filled with râles the next day after the removal of five pints of fluid. Generally, however, a more slow process was carried on, the lung expanding in the first few hours only along the vertebræ and at the apex, and thence more or less gradually rising to meet the parietes of the chest; the parts under the axilla being, of course, the last to fill out. In some instances that state of the lung described by Gardner,* remained for months, the patients being nearly free from all rational symptoms of disease, save, perhaps, a tendency to dyspnœa. Cases 4 and 14, are examples of this. Cases 22, 23, may become so.

The character of the fluid drawn from the chest varied, as in our other category of cases. By a reference to the tabular statement, it will be seen that from forty-seven punctures, the following results were obtained :

* British and Foreign Medico-Chirurg. Review, April 1853, Art. XI.

TABLE 2.

Nothing,.....	5 times.
Serum, a few drops only (2 cases),.....	4 “
Serum in large quantities,.....	16 “
Pus, or purulent,.....	17 “
Bloody,	5 “

The *quantity* of the fluid varied considerably ; three ounces being the smallest, one hundred and seventy ounces being the largest. In this latter case it was pure pus.

The influence of the character of the fluid, the length of the disease previous to the operation, and the existence or non-existence of previous disease, may be learned by the following series of tables.

TABLE 3.

CHARACTER OF THE FLUID IN THE CHEST.	SERUM.	PUS.	BLOODY.	TOTAL.
Recovery from pleuritic effusion,.....	7 cases,.....	5 cases,.....	1 case,.....	13 cases.
Death afterwards, consequent upon the effusion and previous disease,.....	3 “	4 “		7 “
Friction-sound heard, but death a few weeks after from disease of brain,.....	1 “			1 “
Under treatment, doing well,.....	1 “			1 “
Under treatment, with prospect of months of illness,.....		2 “		2 “
				<hr/> 24 cases.

It seems, therefore, that the presence of serum is more favorable for the prognosis than is the existence of pus. This only confirms our preconceived notions, but it is rather different from the opinion I advanced in my previous paper, the facts contained therein not allowing me to hold the opinion I now advance.

The next important element in the prognosis, is the length of time the disease has lasted previous to the operation. The following table will show this.

TABLE 4.

	SERUM.	PUS.	BLOODY.
Average time before puncturing { recovery,.....	2½ months,.....	2 months,.....	
in cases of, { death,.....	3 months,.....	4½ months,.....	3 months.

Whence it appears that whether pus or serum exists, an early operation is more favorable than a later one.

The influence of the existence or non-existence of previous disease may be illustrated by the following.

TABLE 5.

	no disease immediately preceding the effusion,	Of those who had cough, and were probably phthisical,
Recovered from the effusion,.....	10.....	4
Died with effusion remaining,.....	0.....	6

From this table we infer, what, in fact, we knew before, that pleuritic effusions, uncombined with serious pulmonary disease, do not usually destroy life. I cannot but think, however, that in case No. 2 the operation may be said to have saved life, for a time, at least. In case 15 I have no doubt suffocation would have taken place, had not the operation been performed.

Another interesting inference is suggested by this table, viz., we observe that of 10 who had organic diseases, 4 were cured of the pleuritic effusion: 6 died. Now, the puncture was the *sole* cause of the cure of these four, for the lung expanded in all of them within twenty-four hours or a few days after the operation was done. No other cause operated, and therefore to the thoracentesis we must attribute the cure. Is there any physician that can say as much of any other method of cure under similar circumstances? Is there any remedy which will cause an absorption of five pints of fluid in twelve hours, and allow a lung that has been compressed for months to be thoroughly filled with air in twenty-four hours?

In confirmation of these remarks, and to give the reader a more definite idea of the *amount* of influence the puncture had towards the *cure* or *relief* of the effusions, I submit the following data taken from my own cases, compared with similar data obtained by the courtesy of Mr. Scarem, at present house-pupil of the Massachusetts General Hospital, from the records of that institution. In preparing my own, I have taken, *first*, all those cases in which the lung, after having been for weeks, or perhaps for months compressed, has suddenly expanded, within twelve or twenty-four hours after the puncture; *second*, those in which the stimulus above spoken of was given to the various functions of the body, so that all the rational signs grew decidedly better from the moment the fluid was evacuated, while the long-compressed lung dilated but slowly.

In the first, the lung expanded immediately, or within twelve hours after the puncture. In the second, the lung, on average, in $32\frac{1}{2}$ days, or $4\frac{4}{7}$ weeks after the puncture.

I think no one can doubt that paracentesis *cured* the disease in the first class of cases. In proof that it aided very materially toward the same

results in the second class. I present the subjoined table of comparison between my cases and those treated at the hospital.*

TABLE 6.

Length of time the disease lasted.	HOSPITAL CASES.		MY CASES.	
	Whole length of the disease.	After entering hospital.	Whole length of the disease.	After Thoracentesis.
Average duration in cases of complete filling of one pleural cavity,	12 + weeks.	6 $\frac{5}{8}$ + weeks.	13 weeks.	3 weeks.
do. do. partial do. do.	12 "	6 $\frac{1}{2}$ "	9 $\frac{1}{4}$ "	4 "

Supposing all these data to be *absolutely* correct, I might draw from them the following propositions.

1st. *One pleural cavity being full of fluid.*—a. Thoracentesis shortens the disease more than *one half*.

2d. *One pleural cavity being partially filled.*—b. Thoracentesis shortens the disease more than *one third*.

I do not, however, present them as absolutely correct, but merely as approximations to the truth. But I do not see that any one can deny, that puncturing the chest does very materially shorten, and consequently alleviate the sufferings of a patient affected with pleuritic effusion. As if in confirmation of this view, we see that although it appears, in my cases of complete filling of the pleural cavity, that the whole duration of the disease was perhaps as long as it was in the hospital cases, nevertheless there was this great difference of time after the two treatments were commenced, before the effusion was removed; viz. those treated by paracentesis getting well in half the time required by the hospital treatment. I do not believe, however, that thirteen weeks shows the duration of the disease as it will be when tapping is resorted to with as much freedom as we resort to calomel, blistering, &c. For this period of thirteen weeks is really owing to one case, which had lasted *seven months* before a puncture was made. Excluding this case from the calculation, we shall get 7 $\frac{3}{4}$ weeks as the average total duration of cases of pleurisy treated by paracentesis, in connection with other remedies. I will go still farther, and avow my belief that ere long, when we shall puncture *early* after an effusion has occurred, the disease will often be relieved in a much shorter time even than 7 $\frac{1}{2}$ weeks.

* This table is founded on data drawn from fifty-four cases of pleuritic effusion, found recorded in the books of the hospital, between Jan. 4, 1847, and Sept. 9, 1853. In it I have made use of those cases only, in which the disease could be traced by the rational and physical signs to its termination in the hospital; or, if the patient left the hospital before recovery, but after a *long* residence at the institution, I have added the sign + to the number of months the case was under the care of the institution. From my own cases, I have only taken those of a similar character, viz. Nos. 1, 7, 8, 11, 12, 15, 18, 20, 21.

If this be so, are we not morally bound to perform this operation early in all serious cases; that is, in all where there is any considerable amount of fluid, enough, for example, to cause flatness in the lower half of the chest? I am well aware that I shall be met with arguments drawn from the *danger* of the operation. I consider this argument as *null*, when applied to the *exploring canula and suction pumps* used in all my cases. I believe this fear is a *phantom* that has descended to us from a bygone race of men, who were as intelligent, it is true, as any of the present day, but whose means of diagnosis of thoracic disease were *infantile* when compared with our own.

In what cases should an operation be performed?

In my former paper I stated fully the cases in which I should hereafter advise an operation. As I have seen no reason to materially change my mind since that time, I shall transcribe some passages merely. I wrote then :

1st. There cannot be a doubt that it should be performed in all cases, either acute or chronic, in which there is dyspnœa sufficient to threaten death.

2d. I believe that the case of the little child about whom I was consulted in 1849, proves conclusively that the operation should be performed where the pleura is *distended* with fluid, even if the dyspnœa is not permanent, but only paroxysmal, the patient being in the interval comparatively easy. Life might have been saved in that case, if the puncture had been made : but the little patient seemed so well, that we decided to defer it till a more serious symptom should occur. It will be remembered that that very night the patient died in a sudden attack of dyspnœa.

3d. I think that we ought to operate in a somewhat chronic case, where these paroxysms occur, even if the chest be only partially filled with fluid. I saw a man who had been ill about three months, and had evidence of fluid filling one-half of one pleural cavity. It was thought best to try remedies before puncturing. In three or four days he suddenly expired in an access of dyspnœa.

4th. In all *acute* attacks, where the remedies employed do not seem to produce ready absorption, the operation should be performed. Dr. Hamilton Roe says that three weeks is the longest time we should allow the fluid to remain in the chest.* I agree with him fully.

5th. In all effusions, where one side of the chest is full and distended with fluid, I shall advise it, even if there be no great dyspnœa or other serious symptoms; *a*, because it is not uncommon for one having a pleura *distended* with fluid, to die; *b*, because the operation can do no harm; *c*, it may prevent a tedious illness; *d*, because it may oppose tendencies to the development of tubercles; *e*, it will probably prevent future contraction of the chest; *finally*, because in that way an external opening and a harassing fistulous discharge may be avoided.

6th. Case VIII. proves that, although in a very acute case the puncture may not prevent the re-accumulation of the fluid, nevertheless, the operation may be of great service in relieving the prominent symptom of dysp-

* London Lancet, vol. ii., 1844, p. 190.

noea, and in helping on the more rapid cure. It may, therefore, become a question whether even a small quantity of fluid should not be removed within a week after the first attack of acute pleurisy. Time and future cases must decide this. Upon this part of my subject, I cannot refrain from quoting the remarks of the reviewer above alluded to. "The whole argument turns on the facility and safety with which paracentesis can be performed, and although the cases are not sufficiently numerous to allow us to recommend it as in all cases practicable and useful, yet they warrant us in stating, that this operation is one of which practitioners have too much dread; and that, when skilfully performed, it may be practised with very little hazard to the patient, and with a result, in the majority of cases, that is satisfactory to the practitioner." *

Objections to the Operation.—There are two classes of objections (viz., theoretical and practical) brought against the operation of paracentesis thoracis. I confess they are very formidable, nay, insuperable, when applied to it as recommended in most books of surgery. It leaves an open, gaping wound, through which may rush the external air with each movement of the thorax. I will not say that this method may not be useful in some instances. Doubtless it has been, and it may be so again. But the modern European method by trocar and canula, as performed by Trousseau and Hughes, &c., and especially as it has been modified and improved by Dr. Wyman, is one of the simplest and safest of all operations. Still there are objections, theoretical and practical, brought against it. Let us consider, then, their value.

1st, It is said that the chest, being a bony cavity, cannot contract; *ergo*, you never can get out the fluid, or you do so at the risk of injuring the lungs; the objector forgets that the diaphragm and intercostal muscles prevent the thorax from being a bony cavity, and do allow of some contraction. Still further, by means of the suction-pipe, we draw out the fluid, and thus form, perhaps, a vacuum in the pleural cavity. The compressed lung dilates: the other lung likewise admits more air and crowds into the empty space.

But, 2d, The objector adds, by forcibly compelling the lung to dilate, you run the risk of seriously injuring it. How do you know this, save by experiment? Now, experiment proves that nature always gives us notice, by the suffering of the patient, how far we may go in the operation of suction. I have myself operated twenty-three times,† and Dr. Wyman has done so many more times, and in no single instance has any permanent evil resulted from this cause. We have always desisted the moment any complaint was made by the patient.

3d, It is said, you cannot draw out all kinds of fluid. Very true, there may be such cases, I have met with them; but, I think, they will be less numerous as we become more accustomed to the operation, and it is done more properly.‡ Besides, we can always, if necessary, have recourse to the old operation, if the trocar fails.

4th, But you will let the air into the pleura. This, to some minds, is a serious theoretical bugbear. The admission of a small quantity of air does not necessarily cause trouble, unless it be frequently repeated, as in cases of

* London Lancet, vol. ii., 1844, p. 301.

† Jan. 18, 1854. Up to this date, *fifty* times, with the results as above.

‡ The result since, in my own practice, has confirmed this.

pneumo-thorax, and of puncture of the thorax, according to the old operation. I have seen air accidentally *pumped into* the chest, instead of fluid being drawn out! And this caused no injury. The patient never knew of it by his own sensations. I do not believe it excited any inflammation. I am not alone in this opinion. Other operators believe the same; for they have observed the same accident, with similar results attendant thereupon.

5th, You run a great risk of exciting pleuritis by the puncture of the delicate pleural membrane. It is a sufficient answer to this objection that, at the autopsy of cases in which persons have died from other diseases, after a puncture with a fine trocar, no evidence of inflammation from that cause has manifested itself. Case I., given above, also proves it, by showing a similar non-purulent fluid drawn out on two successive operations. Dr. Wyman has noticed this frequently. I have never known pleuritis to ensue.*

6th, You may injure the lung, or strike some other important organ.

Very true; but, 1st, I deny that a puncture of the lung is so very dangerous. It has been done. It was done in a case, as Dr. Wyman believes, under Dr. W.'s care. I have done it. I have seen another do it, and, moreover, use the suction-pipe while the trocar was in the lung. In no case has any evil resulted. The sputa were, in one case, slightly tinged with blood soon afterwards, but no unusual pain or distress resulted to the patient. But, 2d, these are exceptional cases. If our diagnosis be conscientiously and thoroughly made, we need very rarely injure the pulmonary structure. If we injure any other organ, it will generally be owing to our own carelessness.

7th, The intercostal vessels or nerves may be injured by the trocar.

This is possible, but not probable. 1st, It would be difficult, in fact, to strike and seriously injure the artery, because the trocar is so small that a small artery would most probably glance aside. 2d, The spot for the operation may be chosen where the vessels are the most minute. 3d, The operator, of course, will thrust the instrument as near to the upper edge of the rib as is possible. 4th, Finally, among all the operations performed within the past three years in Boston and its vicinity, no serious result has happened to the artery, although, in one case, I observed some slight and temporary hæmorrhage after the withdrawal of the trocar.

8th, One objection brought against the operation is the following, viz.: That all cases of chronic pleurisy will get well after a time, unless the disease be dependent on more serious lesion of the lungs, or other remote organs. In answer, I would say that, according to my experience, in part already given above, it is not true that a person affected with chronic pleurisy, as an idiopathic disease, will eventually get well. He may die, as we have seen, in various ways; which result a puncture and extraction of the fluid may prevent. But, still further, is it of no use to shorten the disease by months? Is it of no service to prevent fistulous opening, and those terrible distortions of the chest consequent on the cure of long pleurisy? Moreover, suppose that tubercular or other disease exists, is it of no service to raise our patients from their bed, to give freedom of breath, and to actually lengthen life, as was done in cases II. and VII. XV. XX.?

* Since this was written, I have noticed in one case, in which several punctures were made, that the fluid became more purulent at each successive operation.

Again; I believe that this operation will be used with advantage in *acute* disease, and may, likewise, shorten *its* course. Case VIII. shows this, where the patient, on the twenty-third day, was up and preparing her dinner, and the effusion subsiding. Case VII. is a still more striking example of this; *i. e.*, if we regard the pleurisy as having commenced when the pain in the side began. If this be so, then the cure was complete in a very few days after the operation.

9th, Finally, some object to the operation because of the uncertainty of diagnosis. You may operate in a case of cancer of the lung, or gangrene, or some other disease than pleurisy.

I can conceive of such an error being made in some very rare cases, but I do not believe that such cases will be likely to happen very often; and, moreover, as I have already said, I think that a slight puncture of the lung with a small trocar is of very trivial moment. We may, therefore, very justly put aside this objection as one of little value against the operation.*

But shall we confine ourselves to a simple puncture and a withdrawal of the fluid? In my previous paper I alluded to the operation by the scalpel, as a barbarous one. I would modify my statement; I believe there are cases in which a *permanent* opening would be of service. In cases, for instance, where repeated punctures have been made with as repeated re-accumulation of the fluid, a fistulous opening may be needed. Case 24 may be one in which it would be well to make such an opening. But even in such case, *frequent* puncturing might answer the same end. And suppose we have decided to have a permanent opening, why not operate with a large trocar, or leave it in the wound for a few hours or even days, as is actually done by Barth and Windriët?

But shall we merely remove the fluid? I think not. The recent observations and experiments of MM. Boinet and Aran in Paris prove conclusively not merely the safety, but the advantage in some instances, of injections of tinct. iodine. Both of these gentlemen give cases† of great interest, in which the iodine seemed to improve the secretions of the pleural cavity and help the cure.

Finally, although thoracentesis in pleuritic effusions has not always effected all the good I could have wished; although, in some instances, it has seemed to do little more than give temporary relief; nevertheless, I am convinced, from the experience I have gained from the preceding cases, that in some instances it saves life, that in a vast majority it gives infinite relief to distressing symptoms, that in none does it cause any harm. I sincerely

* At times, too, a mistake may arise from the lung remaining, as described by Dr. Gairdner, of Edinburgh,* condensed after the effusion has been absorbed or removed; in consequence of which state of the parts, there may be absence of respiration, flatness on percussion, diminished motion of the ribs, &c. All these signs may lead into error. I am now inclined to believe that I made that mistake in case VI. possibly I did so in case XXV. No evil followed in either case. The patients scarcely noticed that the puncture had been made (1853).

† Archives Générales de Médecine, May, 1853. Union. Medicale, Aug. 1853.

* See British and Foreign Med-Chirurg. Review, as cited above.

hope, therefore, that these facts may serve to overcome the prejudice existing in the minds of the profession, to the operation, *at least, as it has been performed on the subjects of this paper*. For myself, unless my present views change very materially, I shall feel that I am guilty of a neglect of a duty to my patient, if I do not urge the operation, in any case, after the existence of effusion has been manifested a few weeks, and when remedies do not seem to effect its cure. I shall feel bound to use it in any case of *large* effusion, however short a time it may have existed. I shall, in other words, regard thoracentesis as I regard other remedial agents, to be used as freely as I use them, viz., whenever I think necessary.

In connection with, and as a most fitting conclusion to these remarks, I cannot forbear quoting from a letter which I received from a gentleman well known in this country and in Europe, and who has had as much experience on this subject as any other individual on either side of the Atlantic. Under the date of June 2d, 1852, he writes, "It has indeed surprised us as well as yourself, that so simple, so harmless, and so beneficial an operation (when proper precautions are taken, by competent observers), has been so little regarded in America or England, where it most strangely continues to be esteemed as a most important and serious one." "It may be interesting to you to know that I have myself been present at, directed, or superintended, at least eighty, and, I quite believe, one hundred operations of paracentesis thoracis," [by puncture with an exploring trocar and the subsequent introduction of a larger one, and without the use of any suction pump.—H. I. B.], "and I never knew it, in any of those cases, do any injury; that in a vast majority of these instances, it has been attended with marked benefit; and that in many, where a cure was possible it has been the important element in effecting that cure."

Appendix. Since finishing this paper, I have perused an article in the Archives Générales de Médecine, for October, 1853.* As it supports views similar in many respects to those advanced in the foregoing article, and is of such recent Parisian date, I propose to make a brief analysis of it. It gives details of four cases of acute pleurisy; in all of them, thoracentesis was performed. Three were cured by it as the chief remedy. In one there was a relapse and illness for an unknown series of months. In those cured, the average duration of the disease *before* the puncture was $13\frac{2}{3}$ days; the duration *after* the puncture was 17 days. In other words, a period of $30\frac{2}{3}$ days was the length of time the disease ordinarily existed. (See Table 6.)

After these cases, the author discusses the various methods used in puncturing, and decides in favor of the trocar and canula, with the moistened tube attached to the latter, the end of which, after the removal of the tro-

* De l'Utilité de la Thoracentese. Par B. SCHNEFF, interne des hopitaux, Lauréat de la Faculté de Médecine à Paris.

car, being placed in water prevents the entrance of air, and acts like a syphon, in gradually drawing off the fluid. He alludes to the fact that in Germany the canula is, at times, left in the wound for some days, and without difficulty. M. Barth has done so. He speaks of the fear of the operation formerly entertained by Louis, Arndal, Skoda, &c., and says that at present these gentlemen approve of the operation. In looking at the beneficial results of the operation, he records the sudden healthful stimulus given to all the functions, exactly as it was noticed in our cases. The operation may be used as a means of *relief* only. He regards it as *almost a specific remedy in acute pleuritic effusion*. The author attributes, rather hastily, I think, the cough which came on in his cases, after the puncture, to the irritation of a little air admitted to the pleura. Valleix and Barth oppose this view, but advance opposite views, as to the real cause, the former believing it to be owing to the sudden *dilatation of long-compressed vesicles*; the latter holding exactly the opposite view, and contending that the fact that the *vesicles can not expand* is the cause.

(Our cases sustain neither of these views entirely. In case 15, the cough was more severe than I ever knew in any of the observations, yet the lung expanded immediately throughout its whole extent. In 20, on the contrary, though the lung dilated, there was little cough. In cases 13, 23, the cough was troublesome while there was no evident sudden dilatation of the lung.)

Iodine injections into the pleural sac are examined. The cases detailed by Aran and Boinet (see above), are alluded to. M. Barth has punctured five times in one case, and used chlorinated injections. Valleix, also, has used iodine with freedom and without injury. Soft, warm water is useful at times. Raumberger, on the contrary, opposes all such proceedings, on purely theoretical grounds, which are proved to be unsound.

His resumé may be generalized thus: 1st, The operation is not dangerous; 2d, A trocar and syphon tube is the best instrument; 3d, A little air in the pleura aids the flow of the fluid; 4th, The results are, a more free and regular respiration, renovation of the forces, better hæmatisis, &c.; 5th, In simple pleurisy, thoracentesis is "the most powerful agent to hasten a cure;" 6th, When symptomatic of other more serious disease, it is an adjuvant alone. (Our cases 4 and 15 prove that puncture cures pleurisy even when connected with, if not caused by phthisis.) 8th, It ought to be performed whenever the dyspnœa makes us fear asphyxia, and as early as possible from the attack. 9th, It is contraindicated in imminent asphyxia. (Case 15 proves this assertion to be incorrect. I cannot but think it wrong; for I believe that the more imminent the danger of asphyxia, the more important it is that the operation should be performed.) 10th, A little air in the pleura does no harm, but is rather useful, as above stated. 11th, Lesions of the lung or intercostal arteries, during thoracentesis, are not noticed by modern authors.

Tabular Statement of Operations for Paracentesis Thoracis, performed between April, 1850, and Oct., 1853.

No.	Age and date.	Profession.	Previous diseases.	How long sick before first operation.	No. of operations and dates.	Character of the fluid.	Amount of the fluid.	Immediate effects of the operation.	How soon the lungs expanded and heart fell into normal position.	Final result.
1.	28. April 17, 1850.	House Painter.	none.	5 weeks.	1st, Apr. 17 2d.	nothing. pus.	3 ix.	relieved of oppression at chest.	not immediately and doubtful how soon—less than 4 weeks.	perfect health after 5 or 6 months.
2.	56. Oct. 1, 1850.	Seaman.	dyspnœa for 6 or 7 y's—probably heart disease.	at least several months	1st, Oct. 1 2d “ 12	1 serum. 2 serum coagulable.	3 xxxvi. 3 xxxij.	great relief; orthopnoea gone. some “drawing” around chest.	on 5th day, or perhaps sooner; friction sound next day.	death many weeks afterwards with cardiac disease.
3.	28. July, 1850.	Machinist.	rheumatism; soreness for 3 months in left breast.	3 months.	1st, July 10 2d, “ 12 3d, “ 14 4th, “ 19 5th, Aug 11 Two natural opening's subsequently formed.	bloody. 19 serum. more purulent.	few drops. 3 i. 3 xxxvi. ... a little. Oj.	easier, pulse better, relief to tension and pulsation of the heart to the right of the sternum. marked relief to dyspnœa.	heart fell immediately toward left two inches.	gradually failed, and died about the middle of August.
4.	48. June 4, 1850.	Carpenter.	Had raised blood many times.	10 weeks.	1st, June 9 2d, “ 11 3d, “ 11 5th, Nov 19 6th, “ 21	purulent. nothing. purulent. nothing. pure pus.	few drops. 3 ix. 3 ix.	{ great relief. stronger. relief.	20 days after operation “respiratory murmur better,” less dull percussion. rubbing sound at the point of puncture.	gradually got well after many months; chest contracting and lower lobe remaining condensed.

5.	6. July 14, 1851.	Girl.	unknown.	unknown.	1st July, 14 2d " 3d "	serum. do. do.	a few drops merely could be drawn.	no effect, neither relief nor trouble.		nearly in artic- ulo mortis, and died soon.
6.	18 or 20 years.	Young man	unknown.	unknown.	1st, 2d,		nothing.	do.		unknown.
7.	29. Aug. 21, 1851.	Spinster.	cough and diarrhea for many months.	2 weeks.	1st, Aug. 23	serum coagulable.	3 xli.	unpleasant feeling about chest, but soon great relief. Heart fell back 1½ inches.	next day mur- mur he'd every- where; minute crepitus.	well of effusion in a week—died a year after, of phthisis.
8.	31. Sept. 3, 1851.	Wife.	pleurisy pain years ago, but well after.	10 days.	1st, Sept. 3	serum coagulating on standing	3 xiii.	great relief—no or- thopnoea afterwards	next day.	well by 12th day after operation. Patient attended to household du- ties. A few phys- ical signs re- mained.
9.	20. Oct. 17, 1851.	Clerk.	cough, win- ter previ- ous.	48 days.	1st, Nov. 1 2d " 3d, Dec. 13 4th, Jan. 14	yellow, amber-like. a little opaque. more puru- lent.	3 xxviii. 3 xviii. 3 xxi. 3 xxi.	great relief—no se- vere dyspnoea after 1st. Patient desired all the rest when he found dyspnoea com- ing on. Cough bad after them all, stric- ture after last.	lung expanded somewhat at apex—never fair- ly distended.	after many mo's died of phthisis.
10.	30. Feb. 17, 1852.	Rigger.	cough for a year.	71 days.	1st, Feb. 27 2d " 3d " 4th,	purulent. " " "	a little. 3 xv. 3 iii. nothing.	{ great relief to dis- tress of patient. { patient almost in art. mortis at time	not at all.	death on 4th, af- ter last opera- tion.

Tabular Statement of Operations for Paracentesis Thoracis.—Continued.

No.	Age and Date.	Profession.	Previous diseases.	How long sick before first operation.	No. of operations and dates.	Character of the fluid.	Amount of the fluid.	Immediate effects of the operation.	How soon the lungs expanded and heart fell into normal position.	Final result.
11.	59. Dec. 29, 1852.	Soldier.	none known, character dissipated	5 weeks.	1st, Dec. 29	yellow serum.	3 xxiii.	relief to fulness—able to lie on either side.	lung came up slowly—friction noticed 30th, perhaps before.	death two mo's after with cephalic symptoms.
12.	21. Feb. 27, 1852.	Wife.	cough during autumn	6 weeks.	1st, Feb. 27 2d, natural opening subsequently took place.	thick pus.	3 xli.	great relief to orthopnea and general uneasy state.	lung had expanded somewhat on 5th day; on 11th much more	perfect health after many mo's.
13.	40. Dec. 30, 1850.	Laborer.	slight dry cough a week before fall which caused his pleurisy.	5½ months.	1st, Dec. 30 2d, Jan. 10	pus. pus.	3 lxi. 3 clxx (!)	great relief to dyspnea and moaning, cough after puncture.	lung did not come up readily before death.	death from opiate.
14.	24. March, 1853.	Clerk.	cough years ago, but well before acute attack.	12 days.	1st, M'ch 20	serum, coagulating	3 xlvi.	relief—dates recovery from operation.	next day lung expanded at upper part; lower never did.	recovered, with condensed lower lobe after mo's.
15.	45. June 10, 1853.	Wife.	cough for many mo's.	6 weeks.	1st, June 10	do.	3 lxxxiii. and 3 vi.	entire relief from threatened suffocation—bad cough—pulse fell—copious frothy expectoration.	immediate expansion of major part of lung.	10 days no difference on percussion of both lungs; well of pleurisy.

16.	July 11, 1853.	Laborer.	4½ months.	1st, July 11 2d, Aug. 5 patient asked for operation.	col'd serum, do.	3 xxiiss. 3 xiii.	respiration less labored—comfortable day—little relief.	no physical signs given.	death some days after last operation.
17.	6 yrs. Oct. 20, 1853.	Boy.	* many mo's.	1st, July 18	pus.	3 xiii.	slightly easier.	never.	death mo's after.
18.	19. July 18,	Clerk.	7 months.	1st, July 19	serum coagulating	3 lxxx.	no immediate trouble, and all the functions of the body immediately began to go on well.	murmurs heard to base of lung next day.	perfectly well in about a month or six weeks.
19.	20. July 30, 1853.	Wife.	5 months.	1st, July 30 2d, Aug. 3	pus. 3 pus.	3 x. 3 iv.	strict'e and faintn'ss relieved on lying down; can lie on left side; rel' to cough.	no marked ch'ge except tubular respirati'n more manifest.	death in two weeks, with tuberculous lungs.
20.	23. Aug. 30, 1853.	Spinster.	2 months.	1st, Aug. 30	serum coagulating	3 xviii.	nausea, vomiting, little cough—felt as if "had lost part of her side."	heart fell to place—next day effusion remaining—equal respiration in back. dyspnoea (?) from tubercles remaining.	in 10 days no effusion remain-
21.	42. Aug. 18, 1853.	Government Officer.	6 weeks.	1st, Sept. 7 2d, " 8	do. do.	drops, 3 liv.	a little faint,—great relief to pressure and dyspnoea.	crackling immediately.	Oct. 6, percu- sion equal both backs and respi- ration pure.
22.	32. Sept. 28, 1853.	Lawyer.	6 months.	1st, Oct. 2	do.	3 lxxvi.	felt a little weak.	heart fell tow'ards place 1½ inches; murmur heard indistinctly.	grad'l improve- ment from time of operation. Under treat- ment.

* N. B.—The patient had been operated on by Dr. Wyman many times.

Tabular Statement of Operations for Paracentesis Thoracis.—Continued.

No.	Age and Date.	Profession.	Previous diseases.	How long sick before first operation.	No. of operations and dates.	Character of the fluid.	Amount of the fluid.	Immediate effects of the operation.	How soon the lungs expanded and heart fell into normal position.	Final result.
23.	40. Oct. 14, 1853.	Laborer.	none.	8½ months.	1st, Oct. 21	pus.	3̄ lxiv.	cough considerable— —one or two bloody re- sputa—much re- lieved of weight— able to lie on either side.	lung did not eas- ily come up, air took place of fluid.	lung very slow- ly expanding— still much air, no return of fluid in pleura; under treatment.
24.	21. Oct. 20, 1853.	Farmer.	none.	6½ months.	1st, Oct. 20	pus.	3̄ xxiv.	relieved from pressure.	murmur along vertebræ, and crackling lower down.	improving in strength, &c. under treat- ment.
25.	30.? Sept. 28, 1853.	Merchant.	cough for months.	3 months.	1st, Oct. 1		nothing.	no effect, either un- pleasant or other- wise.		

A Case of VESICO-VAGINAL FISTULA with the Os Uteri closed up in the Bladder; cured. By J. MARION SIMS, M. D., of New York, late of Montgomery, Ala.

Mrs. H., aged 43 years, large and fat, weighing about 180 lbs., the mother of five children, was the subject of vesico-vaginal fistula, which occurred in August, 1842. In labor about 36 hours—the head impacted 12. She was delivered by Dr. Moore, of Wetumpka, Ala., without instruments. Sloughing of the soft parts occurred some 9 or 10 days after delivery. On the 14th, the sloughing process opened the bladder, and she has never been able to retain a drop of water since. After delivery she was seriously ill for a long time. Her physician had but little hope of her recovery, as she was suffering not only from this extensive vaginal disorganization, but also from a violent attack of acute metritis, which rendered her condition truly alarming. She eventually slowly recovered, but was quite an invalid for a long while afterwards. It was two and a half years before the menstrual secretion was reëstablished; after which her sufferings at each period were almost intolerable, being attended with bearing-down efforts, similar to, and quite as severe as, real labor pains, whereby large masses of coagula were forced through the urethra. This is explained by a very remarkable peculiarity, which is I believe, without a parallel.

The accompanying cut is intended to represent the relative position of the parts. The rectum *a*, vagina *b*, bladder *c*, and uterus *d*, which is tilted over backwards with its fundus impacted, almost immovably under the promontory of the sacrum, while the os tincæ is thrown forward under the arch of the pubis, opening not into the vagina,



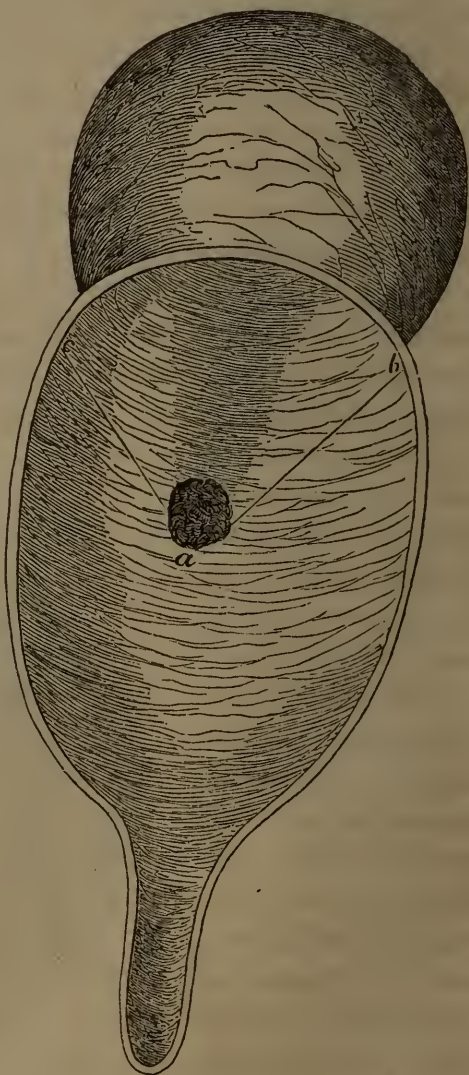
but in the cavity of the bladder, which readily explains the phenomenon above alluded to. The fistula at *e*, just behind the cervix uteri, is barely large enough to admit the end of the index finger. From the fistula back

to the point at *f*, is a large cicatrix, the result of the sloughing, which here, doubtless, did not extend through all the coats of the vagina, while at *e* it perforated the bladder. The vagina was short, but otherwise capacious. This shortening, I suppose, depends mainly on the downward pressure exerted by the retroverted and prolapsed uterus, but in some degree on the loss of substance from sloughing.

The peculiar malposition of the uterus doubtless occurred during the violent metritic inflammation, and when the fistula was large enough to permit the os and cervix to project through it into the cavity of the bladder; after which it gradually contracted during the cicatrizing process, till it was reduced to its present size. Of course, it is not pretended that there was anything singular in the relative position of the uterus, as we are all perfectly familiar with such cases; but that the os uteri should have been incarcerated in the cavity of the bladder, is certainly very remarkable.

In regard to an operation, the first idea with me, as it would have been with any one else, was to liberate the os tincæ from its abnormal confinement, and bring it into its natural position in the vaginal canal. Accordingly I tried the experiment on the 20th of Oct., 1849.

This diagram is to represent a horizontal section of the vagina, with the posterior face of the uterus visible above it, *a*, the fistula, through which a uterine sound slightly curved can be passed into the os and cervix uteri. Freshening the edges of the fistula, I made two incisions from it through the coats of the bladder, upwards and outwards, in the direction of the lines *a—b* and *a—c*. I then passed Simpson's sound into the uterus, and using it as a lever, lifted the cervix into the vagina, where I intended to hold it till the fistula could be closed on the opposite side; but I was foiled completely. The almost unbearable pain resulting from the



section of the bladder at its junction with the cervix uteri, and the no less painful state arising from the efforts to force the uterus into its proper place, all produced such a distressing involuntary bearing down, that the operation could not be proceeded with. The parts were entirely obscured, the vagina being thrown into numberless folds, and the instruments (lever speculum and uterine sound) displaced and forced out, despite of operator and assistant. The patient insisted that it was impossible for her to bear the operation; and I now saw that there was a physical barrier to its completion, even if she had the moral fortitude to undergo it. What then was to be done? Why, there was no alternative but to close the fistula, leaving the uterus confined in its old and unnatural position. There were good reasons for this.

1st. The catamenia would probably commingle with the urine, and be discharged as bloody water, instead of coagula as now, which would certainly render her condition altogether preferable to her present state.

2d. As she was now 43 years old, and as the catamenia had been getting more scanty for the last two years, it was probable that they would soon cease entirely.

3d. The catamenia were now expelled in immense coagula through the urethra, and her condition could not be made worse.

The fistula was closed by the *clamp suture*, composed of two silver wires, passed transversely, and secured in the usual way. Unfortunately, one of the wires broke, close to the shot, just as I was in the act of masking it. Out of upwards of ninety operations performed in my experiments on the treatment of this affection, in the last eight years, this is the only instance in which this accident has happened. But as patient, assistant, and surgeon, were all worn out, I concluded to trust something to luck, and did not replace the broken suture.

Mrs. H. was doing well, till the 4th day, when she had a terrible chill, lasting some three hours, followed by fever and delirium, which, she says, is always a concomitant of fever with her. Besides this, she vomited almost incessantly for about 12 hours. On the next day, at 5 P. M., Mrs. H. informed me that the operation was a failure. I was not surprised to learn this, for I feared that the constant vomiting would burst loose the upper ends of the clamps, which I had failed to fasten properly, but I was greatly surprised that my patient was the first to make the discovery. She acknowledged that she had removed the catheter daily, keeping it out for an hour or more, just to see if the bladder retained urine, when she would reintroduce it herself.

An examination showed the shot slipped from the broken wire, the clamps open, and the fistula reproduced. But for this unlucky accident, there is every probability that the opening would have been closed by a

single operation. The suture apparatus was removed, the patient turned loose, and put on a generous diet preparatory to a repetition of the operation. This was done on the 7th Nov., which was entirely too soon, for the parts had not acquired a sufficient degree of strength and toughness to bear the tension and pressure of the suture apparatus. But she insisted on the repetition of the operation, alleging poverty as the great hastening motive. The fistula was closed by two sutures, passed antero-posteriorly, and clamped in the usual way. Before the operation was finished, I discovered that I had not selected the most judicious method for it. Fistulas near the cervix uteri are always more difficult to cure than those lower down. In this case, as in all similar ones, the anterior edge of the fistula was formed by the free border of the *bas-fond* of the bladder, while the posterior was composed of the firm, inelastic, cicatricial tissue, which had to be dissected from its attachments, to form a flap through which the distal ends of the sutures were passed. Thus the anterior edge of the fistula was thick, tough, and yielding, while the posterior was thinner, not so elastic, and, therefore, more easily cut through by the sutures. Notwithstanding this unfavorable condition, made worse by the too early repetition of the operation, the parts united and the fistula was evidently healed.

The suture apparatus was removed on the 6th day after the operation. The urine was retained perfectly and passed spontaneously, but, unfortunately, I did not then know how long it was necessary for the clamps to remain, to insure a consolidation of the cicatrix. They were removed too soon, by half, and, of course, the cicatrix gradually gave way, and the fistula was reproduced, to the great mortification of all parties. Instead, however, of being large enough to receive the end of the finger, it would now barely admit a good sized probe.

On the 5th Dec. the operation was repeated—the sutures passed transversely. The clamps were removed on the 9th day, which was too soon for safety. She was kept in bed—the catheter in the bladder—for several days longer, and the operation was entirely successful.

The catamenia, as anticipated, appear now regularly at the stated periods, commingle with the urine, and pass off as bloody water; thus, she was not only cured of the disgusting affection, fistula, but also relieved of her dreadful monthly sufferings.

The case, take it all in all, is unique, and I think instructive.

79 MADISON AVENUE, NEW YORK, }
Nov. 23d, 1853. }

Clinical Lecture on Metritis. By Prof. BARKER. Reported by EDWARD F. ARNOUX, M. D.

I WISH to call your attention, this morning, more particularly to two cases which present themselves at the clinique. The first, Mrs. —, is 26 years of age, florid complexion, apparently of a good constitution, and the mother of three children. We learn the following history of her case. Menstruation was established, without difficulty, at the age of 14. She married at 22. She has never been ill except at the time of her confinement, and has always been perfectly regular. With her first and second children, her labor was remarkably short and easy, neither of them lasting over three hours, and her convalescence was rapid and perfect. Her last child was born ten months since. The labor was tedious and severe, and was terminated by instrumental delivery, a prominent and excellent obstetrician of this city having been called in after she had been sick more than 24 hours. Her circumstances required her to resume her household duties on the third day after delivery, and from this she dates, probably correctly, all her present symptoms. The lochial discharge continued, as nearly as she can recollect, about nine weeks, terminating in a profuse leucorrhœa, which continues to the present time. She has constant pain in the back and in the hypogastric region, extending down the thighs, and very much increased by any exertion, as going up and down stairs, carrying her child, which she is still nursing. Defecation is always painful, and produces faintness and nausea. She suffered for a short time, a week or two after confinement, from vesical tenesmus; but this symptom no longer troubles her. She complains of being very weak, but her countenance gives no indication of the severe disease under which she is suffering. By an examination through the walls of the abdomen, we find a rounded tumor an inch and a half above the pubis, pressure upon which produces severe pain. On a vaginal examination, we find the cervix tumefied, and low down in the pelvic cavity, and tender to the touch. The body of the uterus is easily felt through the vagina, enlarged and sensitive on pressure. The womb is movable, but an attempt to move it produces great pain. On raising it up with the finger, we find it is the enlarged uterus which constitutes the tumor in the hypogastric region. On a careful exploration, we find no evidence of disease of the ovaria, or of the broad ligaments. On introducing the speculum, I wish you first to notice the great quantity of the muco-purulent secretion in the vagina. There is at least a half ounce. Wiping this out with the lint, you see the cervix very red and excoriated, its orifice irregular and open. On withdrawing the speculum slowly, you see also the mucous membrane of the vagina very red and inflamed. This patient has evidently chronic metritis, and coëxisting with it,

inflammation of the cervix and vagina. The other patient you have seen several times at the clinique. She was married at the age of sixteen. She is now thirty-two, but looks much older. She has never been pregnant. She states that, since her marriage, menstruation has always recurred at the regular period, lasts a week, and is attended with severe pain. At this time she is confined to her bed, not merely on account of the pain in the region of the uterus, but from nausea, vomiting, and headache. She has a constant leucorrhœal discharge in the interval, and suffers from pain in the back, in the left side under the false ribs, and pain on the top of the head. Her bowels were obstinately constipated, not moving ordinarily, as she says, more than once a week, and then producing great pain and sickness. Probably, the constipation has been increased by her great dread of an operation. Her countenance is pale and sallow, and indicates long suffering. The uterus in this case cannot be felt above the pubes. On a vaginal examination, the cervix is found enlarged and indurated, the os tincæ open, admitting the point of the finger. The cervix is not tender to the touch; but on pushing up the cul de sac of the vagina, you observe she at once complains of pain and nausea. The posterior wall of the uterus is felt, not smooth and insensible to the touch, but with two or three regular, rounded elevations, which are exceedingly tender on pressure. On introducing the sound, you perceive that the organ is retroflexed. The cervix has its normal position; but the point of the sound is directed downwards, while the smooth surface of the handle looks upwards. You will recollect that some weeks since, when we first examined this patient with the speculum, there was ulceration of the posterior lip of the cervix, which evidently extended into the cavity of the neck. From the orifice was seen protruding, a quantity of transparent mucus, so tenacious that we pulled it out in strings with the speculum forceps. The ulceration has been healed by the use of caustics, but the induration of the cervix remains. One other point in the history of the case, let me direct your attention to. Two years ago she stated that she was an outpatient of Guy's Hospital, London, under the charge of Dr. Oldham, who gave her internal medicines, and directed her to use vaginal and rectal injection. She found their use caused great pain, especially those thrown up the rectum. The diagnosis of this case is easily made out. There is chronic inflammation of the posterior wall of the uterus, and also of the cervix. Although the ulceration has been cured, it will probably return in a short time if the induration be not removed. In the early part of my practice I several times pronounced patients cured where the cervix presented a healthy appearance, as seen through the speculum, but found them returning in a few months with the ulceration reproduced. I had not learned to appreciate the importance of induration as a pathological condition.

At this clinique you have seen many cases of the different diseases of

the cervix ; but these afford us an opportunity of studying inflammation of the body of the uterus. And let me here say, that this affection is met with more frequently than is generally supposed. It is associated with most cases of irritable uterus, displacements, dysmenorrhœa, menorrhagia, &c. Let us compare these two cases. In both we have chronic metritis ; but they differ in their origin, their symptoms, their extent, their effects, and their susceptibility to cure by appropriate treatment. The first was undoubtedly developed soon after confinement. The uterus was then in a highly vitalized condition. It did not return to its normal, physiological state. It is not probable that she had acute metritis in the beginning, as in the history of the case there is no mention of those marked and striking symptoms which invariably attend acute inflammation in the puerperal state, and which would not have been forgotten had they ever existed. But the circumstances of the patient led to a gradual development of inflammation from a puerperal state. The inflammation is only an exaggeration of the physiological circulatory state of the uterus after confinement. The inflammation is not limited to the posterior wall, but it is general. Associated with this condition of the body of the uterus, there is acute inflammation of the mucous membrane of the cervix, and the upper part of the vagina. She is nursing, and hence we do not have the periodical exacerbations of the symptoms from menstruation, and hence, also, the case will be much more amenable to treatment. In the other case we have no sufficient data to determine with any degree of certainty its origin. She was married young, and from that time the menstrual function has been accomplished with difficulty and pain.

Dr. Kelley, who has had a large experience in these cases, at the hospital on Blackwell's Island, states that in almost all the cases of the inflammatory diseases of the uterus, he has found that the patients were married, or at least indulged in matrimonial pleasures, when very young. Undoubtedly, marriage is often an exciting cause, whether it takes place early or late in life. But we meet with it also in the virgin. The most intractable case I have ever attempted to cure, was in an unmarried woman, which, by the by, I did not cure. Is the metritis in this case secondary to the disease of the cervix ? Probably there was first inflammation of the cervix. This has terminated in induration and ulceration, and the inflammatory action has been propagated to the posterior walls by continuity of tissue. The retroflexion is undoubtedly due to the increased weight of the posterior wall, resulting from the inflammation. Still, we cannot say with absolute certainty, that this has been the order of succession. The retroflexion may have preceded the local inflammation of the posterior wall, and this may have been antecedent to the disease of the cervix. All her symptoms are greatly aggravated during menstruation. The dysmenorrhœa may result

from the narrowing of the cervical canal by the flexion, and this also may be the cause of her sterility. Were the chronic inflammation to be cured by treatment, these symptoms would still remain unless the flexion was overcome.

Chronic inflammation of the uterus seems never to subside spontaneously during menstrual life. The periodical congestions prevent its terminating by resolution, and this is exceedingly difficult to accomplish by treatment. The first case, then, will be much more readily cured, because she is not menstruating. I will add that it has been found, by those who have devoted their attention especially to this class of diseases, much more easy to subdue chronic inflammation of the uterus, where it is general and where it is the immediate result of acute inflammation, than in those cases where it is confined to the posterior wall and where it is a result of extension of chronic inflammation and induration from the cervix to the body of the organ. At least, this is asserted by Dr. Bennet, and my own experience would confirm the statement. The application of the nitrate of silver to the cervix repeatedly, will probably not only subdue the acute inflammation of the mucous membrane of the cervix, but so modify the circulatory action of the uterus, that, with the general measures we shall resort to, the chronic inflammation will disappear also, and the uterus return to its normal size. The circumstances of this patient are such that we can only direct her to make use of laxatives, so as to keep the bowels constantly open, and very mild astringent injections to the vagina. Let me here say one word in regard to the use of astringent injections. I am satisfied that in acute inflammations of the mucous membrane of the cervix and vagina, they are generally used too strong. I have tried every variety of astringent, but I now use almost exclusively the sulphate of zinc, gr.j—gr.jss. to the ounce of water. The effects are much more satisfactory than when I used alum, tannin, &c., in stronger proportions.

The treatment of the other case will be much more tedious and unsatisfactory. By cauterizations with the nitrate of silver, the mucous membrane of the cervix has resumed a healthy appearance. But the induration must be removed, or we shall soon have the ulceration returning. To restore the tissue of the cervix to its normal state, we must resort to deep cauterizations, either with the potassa fusa, or the actual cautery. The derivative action may so modify the circulation of the uterus that the chronic inflammation of the posterior wall will entirely disappear. But, unfortunately, this is not always the fact. Some cases seem incurable by any method of treatment, at least during the persistence of menstruation. Rest in the recumbent position, general or local depletion just before each menstrual period, an issue just above the pubes, the internal use of calomel or iodine, have been the measures recommended; but Dr. Bennet's method of establishing an issue

upon the cervix itself, has proved more successful with me than any other method. But this has not always effected resolution. I have met with three cases which seemed to resist all treatment. I have now one under my care, where the disease has twice seemed to be removed, or nearly so, but has reappeared in consequence of pregnancy. Her sufferings were so intense and the constitutional reaction so great, that I was obliged to make use of the cold water douches for the purpose of inducing premature labor. After confinement she improved rapidly, but she has again become pregnant, with an aggravation of all her former symptoms.

PART II.—REVIEWS AND BIBLIOGRAPHY.

Manual of Human Histology. By A. KÖLLIKER, Professor of Anatomy and Physiology in Würzburg. Translated and edited by George Busk, F. R. S., and Thomas Huxley, F. R. S., vol. 1. Printed for the Sydenham Society. London, 1853, pp. 498, octavo.

THE Sydenham Society has again done good service to the science of Medicine, by the publication of this work of Prof. Kölliker; and as it is the first work professing to be a complete treatise on human histology which has yet appeared in the English language, it demands an extended notice in this Journal.

Very few medical men possess an intimate knowledge of the subject of this work; both because no systematic treatise has hitherto existed in our language; and because histology is too generally believed to be of very little importance, except to the mere anatomist and physiologist; or at least not at all essential to the medical practitioner.

This is, however, a very great, as well as a very mischievous error, and which we hope this work may do much to correct.

Histology is generally defined to be the classification and description of the tissues; it also includes histogeny, or the doctrine of the development of the tissues. The tissues, however, as seen by the naked eye, are found on microscopic examination to be composed of various distinct elements, each presenting certain peculiarities of form and development, and which the microscope alone can detect. Histology is, therefore, a branch of microscopic anatomy. As studied by Bichat, without the aid of this instrument, it is termed general anatomy, or the anatomy of the tissues. In its present state, it is *minute general anatomy*, or the minute anatomy of the tissues.

Microscopic anatomy, therefore, implies the minute structure of all parts and all organs in their normal condition; *histology* is the analysis of the

organs by means of the microscope, in order to determine the various tissues entering into their structure; while *physiological* anatomy is still another phase of microscopic anatomy also, in which the minute structure is studied with special reference to, and for the purpose of directly associating therewith, the functions of the same.

We deem these distinctions quite important in entering upon our remarks upon the work before us. We shall expect to find it to be essentially an accurate microscopic analysis of all the tissues of which the various parts and organs in the human body are composed.

But of what advantage is such a minute analysis to the practitioner? it may be asked. Let us first inquire, of what use to him is a knowledge of general pathology? General pathology teaches the whole science of disease, and is therefore indispensable to an accurate knowledge of it, and hence, to one who would attempt to prescribe for the same. But it can be acquired by him only who has previously acquired a knowledge of the laws and phenomena of health. In other words, physiology is indispensable as a previous preparation for becoming a pathologist. But again, physiology is based on anatomy, and histology is the very basis of anatomy itself. It has the same place in anatomy as the study of the simple chemical elements in the science of chemistry; and a course of anatomical instruction not including histology, is as deficient as one in surgery which ignores the regional anatomy of the parts whose diseases it discusses.

All this is asserted with the knowledge that almost all the public courses on anatomy in our schools do not include any regular instruction in histology, and for the very purpose of calling public attention to this defect. It is sometimes partially included, we are aware, in courses on physiology. This is, however, very rarely done, though an improvement upon the common practice of ignoring it altogether in our medical colleges. It is, however, thus out of place, and should be understood before physiology is entered upon at all, as a distinct department of study.

Such being the importance of histology to the student of medicine, we welcome the aids to its study afforded during the past two years, by Queckett's small treatise on Vegetable and Animal Histology, by Dr. Leidy's translation of Gluge's Pathological Histology, and now by the work we shall proceed particularly to notice.

We here have only the first half of Prof. Kölliker's entire work; a fact which, in itself, would show its unadaptedness to students of medicine. As a repertory of all that is known in histology up to the present time, however, it is invaluable, and should be possessed by all who would thoroughly prepare themselves for acquiring that precise knowledge of physiology and pathology which the present times demand.

The first 100 pages of this work is devoted to the *general anatomy of the*

tissues ; the remaining 398 pages to the special histology of the skin and its appendages, and of the muscular and nervous systems.

We very much prefer the phrase *general histology*, to "the general anatomy of the tissues," since the latter, as used by Bichat and others, does not necessarily imply *microscopic* anatomy, while histology does so—and the author here means the minute general anatomy of the tissues, which, as we have seen, is *general histology*. Special histology is, however, an accurate expression of the character of the second portion ; since in that, the tissues entering into the particular organs and systems are specified.

In the introduction, the author gives a historical sketch of the development and progress of histology, which, though some facts had been discovered even by Malpighi and Leeuwenhoek (1628 to 1723), was first treated scientifically in 1801 by Bichat in his "Anatomie Generale." By the use of the microscope, it has, during the last thirty years made rapid progress ; and the demonstration by Schwann in 1838, that *all the tissues of animals and of plants originate from cells*, served to connect all previous observations, and vastly to extend the relations of histology to physiology. At the present time, it is believed that the elementary parts of the higher animals, and their development, are well understood ; except the elastic tissue and the elements of the teeth and bones. The combinations, also, of these tissues in the various organs in the human body have been almost exhaustively investigated, with the exception of the nervous system, the higher organs of sense, and the liver, spleen, and the thyroid and thymus bodies. It is, therefore, hoped that a few years more of similar progress will accomplish all in this direction which our present methods of observation can achieve. With comparative histology, however, the case is entirely different. Hardly yet commenced, not years but decades will be required for the necessary investigations.

As aids in histological studies the author mentions the works of Bichat, Weber, Brun, Henle, Valentin, R. Wagner, Todd & Bowman, Reichert, Bendz, and his own work on microscopic anatomy, published in 1850–2. Of these only Bichat, Henle, Valentin, Wagner, and Todd & Bowman, are much known in this country.

Of *microscopes*, he, perhaps naturally, prefers those of his own countrymen, Plössl, Oberhauser, and Schiek ; though he admits the instruments of Ross, Powell, and others in England, are quite equal to the preceding. While some among us, on the other hand, are induced to give the palm to our own countryman, Spencer, we have never found more perfect lenses than the best made by Ross.

The *microscopical preparations* made by Hyrtl of Vienna, Oschatz of Berlin, and by Topping, Hett, Smith and Beck, of London, are highly approved of by the author. We have ourselves used those of Hyrtl, of Topping, and

of Hett, for several years past, but find those of Dr. Durkee, of Boston, equal to any of these in all respects.

a. Prof. Kölliker divides general histology into two parts: I. containing an account of the elementary parts of the body; II. of the tissues.

I. The *simple elementary* parts formed directly from the plasma, are, 1st. Elementary granules, nuclei and nucleoli. 2d. Cells, from which all the tissues are developed. Prof. K. does not speak of simple membrane at all.

1. The *granules* and *nuclei* may be developed directly in a plasma which is in contact with the living organism, or in the interior of a growing cell; the latter inclosing them and its nucleus. The *nucleolus* forms a portion of the nucleus, and like the latter is also a vesicle containing a fluid. The nucleoli are usually from $\frac{1}{1200}$ to $\frac{1}{900}$ inch in diameter; the nuclei $\frac{1}{600}$ to $\frac{1}{300}$ inch.

2. The *cells* are perfectly closed vesicles, of which the typical form is spherical; from $\frac{1}{2400}$ to $\frac{1}{1200}$ inch in diameter (semen and nerve cells even $\frac{1}{600}$ to $\frac{1}{300}$ inch). All cells consist of a *cell wall*—a perfectly homogeneous and structureless membrane; and *contents*, consisting of a fluid, granules, a nucleus, and often, within the last, a nucleolus. Fat cells, however, and the colored blood corpuscles, have only fluid contents; and in the last case these are of a bright red color. The changes which cells undergo in their form in the various tissues, are too numerous to be specified here. The cell membrane is a proteine compound. The contained fluid is also a proteine compound in the primordial cells (those from which the tissues are developed); but not so in the case of fat cells, and the epithelial cells of the various glands.

We must pass over the author's remarks upon the two methods of cell development (*free* cell formation and *endogenous* cell formation), and also upon the multiplication of cells by division; as well as their method of growth, and the absorptive processes going on in their interior in many cases, and the force of excretion manifested upon their exterior. The fact also, first announced by Prof. Kölliker in 1847, that certain cells manifest *contractility*, viz., those found in the walls of the smallest bloodvessels, can merely be alluded to here. Into all these subjects, as well as the metamorphosis of cells also, the author has entered with great minuteness and discrimination. We must add, however, that a much fuller discussion of these subjects, together with the physiology and pathology of cell development, may be found in the prize essay of our countryman, Dr. W. J. Burnett, of Boston.*

* Published in Vol. VI. of the Transactions of the American Medical Association.

The *higher elementary parts* are produced directly from the cells by some modification of form, contents, or connections,—*e. g.*, pigment and cartilage cells, elastic fibres, white fibrous tissue, striated muscular fibre, nerve fibres, and the capillary plexuses of blood and lymphatic vessels. All these will, however, be considered under the head of the tissues.

II. The author arranges the *tissues* in two classes:—1st, *Simple tissues*.—Epidermic, cartilaginous, elastic, and connective [white fibrous] tissues. 2d, *Complex tissues*.—Osseous, smooth and striated muscular tissue, nerve tissue, and the tissues of the blood-vascular and the true glands.

We have no objection in a mere histological point of view to the word *connective*, instead of the phrase *white fibrous*, as applied to the tissue meant; though the latter term is accurately descriptive of the microscopic appearance of the tissue it indicates, and is therefore better. The term "*connective*," however, indicates the function of the tissue; and since, in fact, organs and parts are most frequently connected by a combination of this and the elastic tissues (*i. e.*, by the *areolar* tissue), we have decided physiological objections to the term, and still prefer the phrase *white fibrous tissue*. The areolar tissue should be termed the connective, if this term is used at all; but the white fibrous alone is also sometimes a connective tissue, as before said. As a specific term, then, we object to it entirely, and admit no necessity for any new term.

The author decides the question, whether the white fibrous tissue is developed from cells, in the affirmative. We ourselves believe it to be in this respect an exception to the great doctrine first enunciated by Schwann; though it is also admitted that in the formation of cicatrices it may be formed either by the direct fibrillation of plasma, or from cells. Prof. K. does not recognize the *areolar tissue* at all. When he meets with this, he terms it "connective tissue [white fibrous tissue] with elastic fibres super-added." This also, we consider, tends to produce confusion on the part of the English or American reader. The adipose cells also he does not regard as a distinct tissue, but as an accompaniment, in certain parts, of the connective tissue.

In regard to the remaining tissues, we find nothing which has not been already made accessible to American readers, for the last five years, through the pages of Carpenter's "Human Physiology;" and from which work alone, almost, medical students in this country have hitherto been obliged to obtain their knowledge of histology. Prof. K.'s discovery in 1847, that the smooth [non-striated] muscular is not an elongated band containing many nuclei, as before maintained, but is a mere simple elongated cell, has been already alluded to. He has also found contractile cells, though not always elongated (sometimes merely oval), in all parts where contractility had been before noticed; as in the dartos, the areola, and mamilla of the

female, the tactile papillæ of the skin, the walls of the minutest blood vessels, &c., &c. These he calls "fusiform contractile cells." Under the phrase "blood-vascular glands" the author includes the spleen, thymus, and thyroid bodies, &c. This first part of the volume is illustrated by forty-four elegant woodcuts.

b. The second part of the volume—Special Histology—includes the structure of the skin and its appendages (nails, hair, and glands), and of the muscular, osseous, and nervous systems. In this part we find little of value which is not already familiar to those who possess Hassall's "Microscopical Anatomy," or Todd & Bowman's valuable work. Some peculiar views will, however, here be pointed out.

1. Prof. K. includes the superficial fascia, or subcutaneous areolar tissue, as a part of the skin; and makes the latter to consist of three layers—the one just mentioned, the corium, and the epidermis. He does not mention the basement membrane at all. We prefer, for all practical purposes, and also histologically, to regard the subcutaneous areolar tissue as entirely distinct from the skin; and have been in the habit for years of demonstrating the basement membrane as a distinct layer, where the papillæ are well developed, and which separates the latter from the epidermis. Prof. Kölliker also first found the smooth muscular fibre in the corium, in every part where hairs are well developed. They are inserted into the hair follicles, and are called by Eylandt the "arrectores pili." They are quite abundant, as just stated, in the areola and nipple of the female; they constitute the "dartos," so called, and abound in the subcutaneous layer of the prepuce, of the anterior part of the body of the penis, and of the perineum. That two distinct layers of smooth muscular fibre exist in the urethra of the male, has also been lately demonstrated by Mr. Hancock, of London. These observations are replete with physiological interest. The skin and its appendages are illustrated by forty-five woodcuts.

2. In regard to the muscular system, Prof. K. asserts that the primitive muscular fibre does not differ in size in the male and female, as usually asserted, nor in weak and robust subjects. He regards the fibres as made up of fibrillæ, but not of discs also, as described by Drs. Todd and Bowman. We believe these observers to be in this respect correct. We also prefer the term "myolemma" to express the tube of simple membrane containing the muscular fibrillæ, to the term "sarcolemma" as used by Prof. K. The word "perimysium" is, however, an appropriate name for the sheaths of the muscular fasciculi, and that which invests the muscle as a whole. The *myolemma* is, however, formed of simple membrane, the *perimysium* of areolar tissue.

Muscles are inserted generally into the periosteum of the bones. Some,

however, are inserted directly into the bones (*tendo Achillis*, *deltoid*, *pectoralis major*, *latiss. dorsi*, &c.) ; and others still into the corium of the skin—the muscular fibres being continuous with the fibres of the white fibrous tissue in the latter.

Only the larger muscles are supplied with lymphatic vessels ; which leads to the conclusion that the very few existing in them belong rather to the *perimysium* than to the muscles.

Both the fine (sympathetic) and the large (cerebro-spinal) nerve tubes are distributed to muscles ; the latter, however, being eight and one half times as numerous as the former. The latter, however, become gradually smaller after penetrating the muscle, and at last terminate in a plexus of fibrils not more than $\frac{1}{5000}$ inch in diameter. Thus diminished in size, they resemble the fibres of the great sympathetic nerve. They terminate among and around the fibres in looped anastomoses with each other, but not in returning loops, as sometimes described. They are not distributed to all the fibres in a muscle ; and only here and there at intervals in the course of their length.

The fine nerve fibres (sympathetic) follow, and are distributed to the vessels of muscles ; to the arteries and veins, but not to the capillaries. We know no reason for the belief that capillaries are ever supplied with distinct nerves. This is a mere assumption, found necessary to support certain ancient views of inflammation.

Only the larger *tendons* contain any nerves, and these are all of the fine variety. We have not the space for a specification of the author's interesting remarks on the changes in the appearance of the ultimate fibres which occur in the various pathological conditions of the muscular system. He admits, with Weber, that a powerful muscle may shorten in contraction down to one-fourth, or even to one-sixth, of its original length. Drs. Todd and Bowman regard the extreme shortening as much less than this. Here, also, we consider the latter observers the more accurate. He does not believe in muscular "tone," as usually understood ; but considers this a mere "elastic tension," and not the result of vital action—not dependent on the true muscular contractility. Twenty-two woodcuts illustrate the histology of the muscular system.

3. The osseous system is illustrated by twenty-eight wood engravings, and the nervous system by twenty-nine.

Both of these systems are described at length, and with great accuracy and discrimination ; and we regret that this notice has been already so far extended as to preclude an account of his investigations in regard to the nervous system especially. He does not admit any anatomical distinction between the thick nerve tubes (cerebro-spinal) and the thin (great sympathetic) ; since some tubes present both of these characters in different parts

of their extent; and many, at least of the thick tubes, terminate in more slender continuations, resembling the thin tube, as has been remarked of the nerve tubes distributed among the muscular fibres. Moreover, all intermediate sizes and appearances are found, between the proper thick and the thin tubes,—sometimes all these in the same nerve trunk. He does not, however, deny a *physiological* (functional) difference between the thick and thin tubes, as all the facts compel us still to admit. Hassall, indeed, believes it most probable that the fibres of the great sympathetic nerve, so called, are mere bundles of smooth (non-striated) muscular fibres, as they are usually difficult to distinguish from the latter—a position, we need not say, we do not accept.

The connection of the nerve tubes in the nervous trunks with the nerve cells of the centres (cineritious matter) is clearly demonstrated by the author, and the various forms of communication pointed out. Thus, the generally admitted probability, that the nerves are merely conducting media, to and from the centres, of afferent (sensory and incident) and efferent (motor) impressions, is vastly increased; while the cellular matter of the encephalon and spinal cord (and its ganglia) must be regarded as the source of all motor power, and the recipient of all sensory and incident impressions. And in this view of the subject, the encephalon and cord may be regarded as a congeries of cells (each having its connecting tube) packed up in the same organ; as the liver or lung is an aggregate of its lobules, and the kidney of its cones.

The special histology of the vessels, the blood-vascular glands, and the true glands, remains to be discussed in the second volume, which it is hoped will be issued by the Sydenham Society without the delay so common of late in the issue of similar works by the London press. We shall take pleasure in giving it an extended notice whenever it appears.

In regard to the mechanical execution of the present volume, we have nothing but commendation to offer; and we repeat that, though the size of the whole work may well intimidate and its copious details confuse the medical student, we cordially recommend it to all teachers of anatomy and physiology, and to all who would become accomplished anatomists and physiologists.

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The Transactions of the American Medical Association. Instituted 1847.
Vol. VI. Philadelphia, 1853, pp. 866.

THE American Medical Association held its last meeting in this city, and the volume before us is the result of the “transactions” of that meeting. We say it is the *result* of the transactions of that meeting, because it

is by no means true that the reports, monographs, and essays contained in this volume were read before the Association. Some of the reports were so read; of some, the authors gave a written or verbal summary; while others were not read at all, one having been pronounced by its author unfit to be read before the Association.

When a book is first seen, decided impressions are derived from its external appearance—its *physique*. We know of nothing to which to liken this volume except a brick, and a friend suggests that by so doing we should disgrace that useful piece of clay. The paper of which it is made, is piled one sheet directly upon another, and around it is thrown a cover of stiffened, tea-colored paper. The first impression is not at all favorable. A proper cover of cloth, however simple, would have added exceedingly to the good appearance of the book, and to its attractiveness; neither of which things should be neglected in a publication which is to go out to the world as the official report of the proceedings of a “national” society. The ready reply to this is, that the state of funds in the treasury does not allow of the additional outlay. Frequently a valid excuse, we are not quite prepared to admit that it is so this year. For when the treasurer advised an increase of the assessment on members, it was voted promptly, and would have been so if he had asked for ten dollars. Moreover, the book could not have cost more than three dollars, because it is offered to clubs for that price, and it is not for a moment to be supposed that the committee on publication would offer it to any one for less than it cost. An additional dollar charged for a volume bound, if it were simply in cloth, would have been willingly paid; while there would not have been quite so much discrepancy between the price paid for the same thing by members of the Association and by those who are members of some other body. We do not mention these things as the most important, but as being the thoughts which first suggest themselves to one looking at this uncouth book.

The first fifty-one pages are taken up by the record of the minutes of the meeting, on which we shall not now dwell. We shall also pass over the reports of the committee on publication and of the treasurer, as well as the excellent address delivered by the retiring president, Dr. Beverly R. Wellford, of Virginia; though we cannot refrain from expressing our regret that no more notice was taken by the Association of the measures recommended by him, this neglect appearing to be almost, if not quite, uncourteous.

At present we propose to speak of the scientific reports contained in the volume, taking them up, possibly, not in the succession in which they are bound together, but as may suit our convenience.

A curious custom has grown up in this Association, of appointing a committee to report on a special subject, and then, as the result of the

appointment, a report is presented by the chairman only, or by some other individual of the committee. The report of the committee on medical education is made according to this custom. Five gentlemen, appointed from different States, composed the committee. The report is signed by the chairman only, no reference being made, so far as appears, to any other member. To this course we shall not stop to object, and allude to the custom, that it may be distinctly understood that the doctrines of this report, as well as those of others, are merely the expression of the opinions of an individual, not the result of the thought and inquiries of a number of men from different parts of the country, setting themselves to work to investigate an important subject. Whoever, then, may be the reporter, he clearly cannot carry with him the influence that even the same ideas would if supported by the names of his associates.

The report on medical education at once commends itself by its brevity, occupying, as it does, only thirteen pages—an excellence which is not found in all these reports. Dr. Zina Pitcher, the chairman, by whom this report is made, first reviews the action of previous committees on the same subject, and expresses the opinion that both the schools and private practitioners have, in their several capacities manifested a disposition to do what has been in their power to elevate the standard of medical education in our country. This effort to improve, Dr. Pitcher attributes, and we think justly, to the agitation of this subject by the Association. Having, then, “sufficiently elevated ideas of the mission which the medical colleges now in being are designed to fulfil,” the opinion is expressed that one thing more is wanted to remedy the evil everywhere existing, that men who are no physicians by education assume the title of doctor, and have their right to charge fees for practising medicine, and to collect them too, acknowledged by the judicial courts. The remedy which Dr. P. proposes is “the establishment of free colleges for the preparatory and professional education of the young men now scattered over the wide and half-cultivated domain of the West.” This has been done by the University of Michigan (Dr. P. is from Michigan), which is endowed by government and regulated by State authority. The medical faculty of this institution (Dr. P. is, we believe, a member of the faculty) requires compliance with the recommendations of the American Association, “except attendance upon hospital clinics,” and have given notice that hereafter they will require a preliminary examination for admission into the medical as well as the academical department of the University. The term is seven months, four lectures being given a day by five professors, and daily examinations are made on the topics of the preceding day. The pupils are divided into two classes, juniors and seniors; and the latter are required occasionally to read essays on medical subjects. The juniors are examined at the close of the year by the faculty, in anat-

omy, physiology, materia medica, and chemistry; while those proposing to graduate are examined before the censors of the State Medical Society. An additional stimulus to exertion is furnished by the publication of any thesis offered, if the faculty deem it worthy of a place among the public documents.

Of this division of pupils, and of the examination of both juniors and seniors in the studies which they separately pursue, we highly approve; and it is undeniable that if the same course could be pursued by all the medical institutions of the country, a real advance would be made in the matter of professional education.

In the remedy proposed for freeing our country, and especially the West, from the mass of uneducated men who ignorantly profess to cure diseases, calling themselves doctors, we have no confidence. These men do not practice in this way because they have no money to spend in getting an education, but because they can obtain a little money without any expenditure of capital. But few can be brought into a free school to study medicine for three years, who would not manage to obtain assistance sufficient to enable them to complete their education, at other institutions, if they manifested any amount of talent adapting them to the profession. It is the time required, more than the money, which prevents these men from coming in legitimately; and this no institution *ought* to shorten.

Dr. Pitcher then gives a partial statement of the influence of hospitals as places for clinical instruction, objecting to their influence upon students. He has brought together all the objections to this system, and left them to stand unsupported by the arguments in favor of hospital instruction. It is better that the *beginner* should not "walk a hospital," we allow, but it is not worse for him to do this than to accompany the private teacher in his visits to patients. But we cannot now argue the question, and only ask if it does not accord with the experience of all, that the cases of disease seen in large hospitals by students during their professional education, continue to prove a subject of profitable meditation and pleasant remembrance long afterwards, and if these same cases do not prove very useful in directing the mind of the practitioner in saving human life, whether he labor among the mountains or on the prairies.

As to the remarks of Dr. Pitcher upon the necessity for more complete preliminary education of students, we entirely agree with him; and so, we are persuaded, does a large body of the profession. But if the authorities of the University of Michigan insist upon this, they will not by their free education much lessen the number of irregular practitioners at the West.

On page 479 there commences a paper entitled "On Coxalgia, or Hip Disease, by Alden March, M. D., Albany, N. Y."

In this essay, Dr. March claims that he is the first and only pathologist

who has succeeded in perceiving the rationale of morbus coxarius ; and, as a consequence, that the methods heretofore practised in the treatment of this disease are erroneous, and should be replaced by one that is new, and nearly or quite peculiar to himself. These are very large pretensions. We purpose candidly to investigate with what force of reasoning and exposition they are sustained, and at the same time to submit such views of our own as the discussion of the subject may suggest.

At the very outset, we must protest against Dr. March's assumption that most surgical writers ascribe the shortening of the limb in morbus coxarius to the dislocation of the head of the femur. His authorities do not justify this assumption. Liston, for instance, writes that dislocation is by no means a frequent cause of the shortening ; and Carnochan, who, by the way, is inaccurately quoted by Dr. March, says that the recurrence of dislocation is a rare result. Upon this showing, it is plain that Dr. March misapprehends the pathological theory he aims at confuting. The sophistry is involuntary, no doubt, but when found in the premise, is not the less fatal to the soundness of the conclusion.

Dr. March's own theory is, that spontaneous dislocation "seldom or never takes place." Which does Dr. March mean ? If he means that it seldom takes place, he means what is not new. If he means that it never takes place, he means what is not correct. A pathological doctrine, expressed in language thus vague and incoherent, is scarcely worthy of serious consideration.

Let us glance at the history Dr. March gives of his discovery. After the examination of two or three bony specimens, in 1845 or 1846, it seems that the author came to the conclusion that the symptoms of dislocation, in the third stage of the disease, could be accounted for by the strongly marked organic changes in the form and relations of the head of the femur and acetabulum. But long before this conclusion reached Dr. March's mind, it had been communicated to the professional reader by Liston and other writers. According to the distinguished English surgeon, the whole cartilage on the head of the femur is often completely removed ; exposing the bone in an ulcerated condition ; and when the system has long borne up under the disease, the greater portion of the head, neck, and even of the trochanter is destroyed, the extremity of the bone being completely altered in form, and composed of a loose and spongy structure. A similar disorganization occurs in the acetabulum ; the cartilage is often wholly removed, and the margins of the acetabulum absorbed, a large and flat ulcerated depression merely being left for the reception of the diseased femur ; in other instances the margins remain unaffected, whilst the ulceration proceeds in the centre, and the cavity is thereby much deepened. Not unfrequently, the ulceration proceeds farther, and an aperture is formed in the acetabulum,

so that matter accumulates in the pelvis. The opening is sometimes so large that the femur is protruded through it. When matter has formed in the soft parts around the joint, portions of the bones of the pelvis, in contact with the pus, are ulcerated to a greater or less extent, and sometimes these ulcers are surrounded by deposits of new bony matter. From such changes in the osseous parts of the articulation, the limb is shortened, sometimes to a great degree, though no dislocation has occurred. Indeed, dislocation is by no means so frequent a cause of the shortening as is generally believed.

It were useless to quote at length the various authors whose notions of the condition of the tissues about the coxo-femoral articulation are the same as Liston's. In fact, it has long been known that the symptoms of dislocation in coxalgia are often caused by changes occurring at the head of the femur and in the acetabulum, the bones not having changed their articular relations; but that at times, though seldom, if the patient lingers for a long period, during the third stage of the disease, before he entirely succumbs, the acetabulum, and capsular, and round ligaments, become destroyed, and the head of the femur also, and that the upper extremity of the thigh bone slips, according to the position of the patient and other accidental influences, sometimes towards the ischiatic notch, sometimes on the surface of the ilium, sometimes towards the pubis, or even may pass through the bottom of the acetabulum, previously destroyed by ulcerative absorption. This is the true pathology of the disease—Dr. March does not say to the contrary; what he does say, we have already noticed.

The mode of treating morbus coxarius, by extension and counter-extension by splints, recommended by Dr. March, cannot be said to be one of recent suggestion. It has been in practice for more than a quarter of a century, even in this country, and has been taught in many of the medical schools of high character. That it has fallen into comparative disuse must be attributed to its ascertained results. We are entirely opposed, and from observation, too, to the principle of treating morbus coxarius by extension and counter-extension. We do not believe that the progress of the disease can be retarded by any such mechanical means, or that progressive or ulcerative absorption can be retarded by the use of any form of splints, however ingeniously devised. The object, supposed to be attained by extension and counter-extension, is to prevent undue pressure upon the surfaces of the diseased bones, entering into the formation of the joint. If the configuration of the hip joint, and the origin, insertion, and direction of the various muscles passing from the pelvis to the femur, be considered, it is not easy to perceive how extension and counter-extension in the axis of the body can effect the end just mentioned. Certainly there are adductors, abductors, flexors, and extensors of

the thigh, and these may be acted upon by extension; but on the other hand, the pyriformis, the obturators, the gemelli, the quadratus femoris muscles, and the upper part of the adductor magnus, pass from the pelvis to the upper part of the femur, in a direction almost transversely to the long axis of the body and inferior extremity, and it is not to be expected that extension maintained in this direction can influence these muscles so as to prevent their action in retaining the head of the femur towards the acetabulum. The head of the femur is also kept *in situ* by atmospheric pressure, to overcome which, alone, would require an amount of extension not likely, if maintained long, to be easily supported. Moreover, by extension and counter-extension, such as that which is effected by Physick's long splint, or others constructed in a similar manner, the head of the femur is pulled downwards, upon the gland of Havers and upon the round ligament, as well as upon the lower portion of the cup of the acetabulum, and the pressure is only thus transferred from one side of the joint to the other.

It is in the last or third stage of hip disease that extension is insisted upon by Dr. March; but he declares that the long splint must be used in the early stage, so as to maintain the joint in a state of rest, "that the inflammation may subside." We cannot perceive the novelty claimed in the pamphlet by Dr. March; in regard to this point in the treatment of morbus coxarius. Besides the use of Physick's long splint, used many years ago for this purpose, Dr. Randolph, of Philadelphia, was in the habit of using a splint of carved wood, modelled so as to fit exactly the limb, partly enclosing it, and extending from a little above the crest of the ilium to some inches below the knee; and to this end also, several other methods have been recommended, such as splints made of papier-mache, of stout binder's board, of sole leather, or of wire. The doctrine of treating morbus coxarius by extension and rest, splinting the patient and keeping him in bed, is not new; but as Dr. March has been at some pains to advocate this plan of treatment, we may inquire for a moment how far the doctrine is correct and likely to supersede every other treatment. Dr. March, to prove the great benefits to be gained by extension, thus reasons: "I believe it is a conceded point by all pathologists and surgeons, that the muscles are the inherent, internal disturbing agents of displacement in fractures; that the lesion in the broken bone, and the irritation of the muscles in juxtaposition, result in inflammation and spasmodic contraction."

If Dr. March means to say by this sentence, that the irregular ends of the fragments of a broken bone are apt, by their irritating action, to produce spasmodic muscular contractions, the assertion cannot meet with contradiction; but we cannot perceive what bearing such a fact can have upon the therapeutics of the last stage of morbus coxarius. Again, says Dr. March, "I believe, also, that another point in relation to hip disease is

equally well settled ; it is that the muscles about the joint are the active agents in producing distortion. The inflammation of the several parts of the joint extends to the muscles more or less, by which they are stimulated to act either continuously or spasmodically, fixing the limb in its malposition." The drift of these remarks is to prove or trace an analogy between the involuntary spasmodic contractions of the muscles, when irritated by the spiculated fragments of a broken bone, and the action of the muscles about the hip joint, in the third stage of morbus coxarius. We cannot perceive such analogy, nor trace any similarity of condition between the irritation imparted to a set of healthy muscles, from a direct and active cause, as is the case in fracture, and the influence of a chronic malady of a diseased joint upon the contiguous muscles, already paralyzed, atrophied, and more or less insensible ; nor do we believe that the distortion or malposition of the limb, in the third stage of morbus coxarius, is effected and maintained by spasmodic or continuous muscular contraction. On the contrary, we believe that the malposition or distortion of the limb in hip disease is the result of an instinctive muscular act, effected chiefly by the volition of the patient. The direction of the malposition of the limb is so frequently the same, that it is laid down sometimes as pathognomonic of the disease ; and this sameness of position must be traced to a different cause from spasm. The thigh of the affected side is thrown over the thigh of the other side ; and from this position the patient receives much relief from the intensity of his suffering. The thigh of the affected side becomes a lever, resting over the other thigh, which serves as the fulcrum. The weight of the leg below the knee serves as the power applied to the lever ; and the head of the femur is raised from the inflamed acetabulum, and thus the reciprocal pressure of the diseased surfaces of the head of the femur and acetabulum upon each other is lessened.

It may reasonably be asked : what is to be gained in any stage of hip disease, by disturbing this position of the limb, from which the patient receives so much relief, and substituting another position, effected by violent extension of the limb, and maintained by the mechanical action of splints ? It is very certain that any attempt to change the instinctive position of the affected side by extension, is the source of excruciating torture to the patient, and that it is impossible, at times, from this circumstance, to maintain the limb in a constrained position. Can he hope by change of position to facilitate resolution, although irritation be thus added to the diseased joint ? Can he hope by splints to change the cachectic diathesis upon which the disorder depends ? or can he expect that the tuberculous matter deposited in the cancellous structure of the bones will thus be more easily absorbed or extruded ? Theory would say no ; and experience, some of which we happen to have on this point, would also answer in the negative

One great object which Dr. March seems to have in view in this essay upon morbus coxarius is, to advocate the observance of a perfect state of repose to the joint. On this point Dr. March thinks he merits some claim as to originality, which does not require discussion. He thus advocates the necessity of rest in the treatment of hip disease: "Suppose you had a severe burn or an ulcer on the back of one hand, and with the other were to rub it a dozen or twenty times a day, how long do you think it would take to heal such a sore under such treatment?" As a mere rhetorical device for explaining the treatment to be practised in hip disease, illustration by analogy should not be needed; for medical therapeutics best stand or fall by their own merits, and should always be inferred from the fixed and exclusive consideration of the case. But Dr. March manifestly means something more than illustration. He contends that the same reason which will prescribe rest in the case of a local lesion—like a burn—will also prescribe it in the case of a constitutional disease, like morbus coxarius. Now, although we are not disposed to question the general utility of keeping at rest a part which may be suffering from inflammatory action, where the disease is of a cachectic character hygienic observances become so necessary that the physician must refuse to prescribe that absolute rest with which they are incompatible.

To obtain perfect repose of the hip joint, it becomes necessary to confine the patient to bed, and when the length of time generally required for the treatment of morbus coxarius is considered, it is evident that the health must become still further deteriorated by such tedious and uninterrupted confinement. In fact, by the prolonged observance of the recumbent position, the organs in the large splanchnic cavities become congested, and may take on disease, respiration is interfered with, the circulation becomes languid, the assimilating functions become perverted, and the whole animal economy becomes further deteriorated. For this reason we reject Dr. March's theory of the great utility of perfect rest to the limb as being applicable to the treatment of hip disease.

In contradiction to the mechanical plan of treatment, of extension and counter-extension, and perfect rest, so much relied on by Dr. March, we prefer to look upon morbus coxarius as a disease to be reached by the administration of suitable constitutional remedies, and the observance of proper hygienic and dietetic precepts. We prefer to allow the patient so afflicted to maintain his limb in the position which his instinct tells him is that which relieves him most from pain, and which also the anatomical structure of the parts diseased would dictate, to the prescribing of violence, having for its object the forcible and permanent extension of the limb, and to the prescribing of splints to retain it in that position: again, we prefer, to constrained confinement and rest, that the patient should follow his

desire of rest or motion as instinct and feeling may suggest. When the diseased condition of the joint required repose, we have invariably found that the patient himself expressed a desire for it. During exacerbations of the disease, whether in the early or later stages, the patient will demand rest to the limb; whereas during remissions of the disease, or while resolution is progressing, there is an instinctive desire for locomotion. While such favorable prognostications are present, with other manifestations of amelioration, we do not object to the patient indulging in voluntary change of position. If he is disposed to leave his bed, we allow him a pair of crutches to do so, not dreading, as a general rule, that too much motion will be imparted to the diseased joint, but anticipating benefits to the patient from locomotion, change of air, change of position, and improvement to respiration and to the functions of assimilation.

While such principles of treatment are observed in relation to the position and motion of the limb, the constitutional treatment is assiduously attended to, dietetically and medicamentally. With the exception of short intervals, which occur, of inflammatory exacerbation, nutritious diet is ordered, with whatever other generous regimen may be suitable to the case under treatment. At the same time, constitutional remedies, generally of a tonic and antistrumous character, are prescribed in suitable doses, according to the age of the patient. While pursuing such medicamental treatment, the disease locally is acted upon by means of counter-irritation, effected by the moxa, the actual cautery, or by the seton or issue, according to the exigencies of the case. We have seen successful results from such practice often enough to induce us to give it the preference over any mode of treatment founded upon a merely mechanical theory, whether of extension or counter-extension, or of entire repose to the joint. If Dr. March persists in his theory, we shall be pleased to have from him the minute statistics of some twenty-five or thirty cases of morbus coxarius treated according to the mechanical theory adopted and recommended by him; and if he is desirous of seeing morbus coxarius treated more as a constitutional disease than as one purely local, we can direct him to a quarter where he can see both the treatment and the results.

In conclusion, we cannot refrain from stating that Dr. March has entirely failed to impress us, either with the originality of his views, or with the usefulness of his theories, as put forth in this paper. We cannot give sanction to his claim for suggesting a novel pathology for morbus coxarius, nor can we speak of the treatment of this malady, as recommended and adopted by him, in any other terms than to deny its utility, and to condemn its adoption.

[To be continued.]

Introductory Address on Homœopathy. By DR. CHARLES A. LEE.

THIS address before the class of the Starling Medical College, is written in the author's usual clear and forcible style, and is a complete refutation of the absurdities on which Homœopathy, as an exclusive system of practice, claims to be based.

There are those who profess to believe that all mention of Homœopathy serves only to promote its extension, and who decry all agitation of topics connected therewith; as if they, on the other hand, propose, forsooth, to annihilate it merely by ignoring its existence. Some such, indeed, are always present at the annual meetings of our National Medical Association; there to exert their influence solely, perhaps, in crushing any proposition for arresting the various phases of irregular practice, by a motion to "lay on the table." We have been interested to observe the extreme susceptibility of these gentlemen in connection with this class of subjects, but have not yet precisely made out its pathology.

Cherishing, however, no respect ourselves for this policy, we rejoice to see the foundations of this system so logically and fairly discussed, and, withal, so thoroughly exploded. We fully agree with Dr. Lee that a system "which has survived more than fifty years, and has in that time pervaded the whole civilized world, which has found converts among the intelligent and the educated classes, and even among well-educated (??) members of our own profession; which has its literature, its hospitals, its dispensaries, its chartered colleges; which has its practitioners scattered throughout nearly the whole extent of our country; which, however, sets itself up in opposition to the established facts and principles of medical science, boasting a superior power in controlling disease—such a system certainly has claims on our attention, and demands our most diligent and unbiassed scrutiny."

Our previous remarks will not be understood to encourage any harshness of language in regard to any of the various forms of quackery. There is no occasion for either animosity or invective; and they all flourish on both, as a certain kind of grass becomes more rank in proportion as it is trampled under foot. But a candid examination of the system under consideration, can never induce an intelligent mind to *adopt* it, but must, so far as it has any effect, produce the opposite result. To convince those of their error who have already adopted it, is, of course, not to be expected; since in no case, as we believe, have the conclusions of their *reasoning faculties* been their motive for its adoption.

To all such efforts, therefore, as those to which we have alluded, if conceived in a candid spirit, the MONTHLY will give, we hope, a fearless, and not a feeble support.

Dr. Lee admits in the outset, a great difficulty in determining precisely what Homœopathy is, just at this present time; it having for years been constantly experiencing changes. This fact is admitted even by the General Congress of German Homœopathic Physicians. Most still believe in the "spiritual effects" of medicines, as did Hahnemann, and in the astounding potency of infinitesimal doses; but some now agree with scientific physicians in rejecting both these dogmas.* These two foundations of the system are thus becoming undermined by homœopathsists themselves; and the only two which are still generally maintained by them, are the doctrine that like cures like (*similia similibus curantur*), and the psoric theory of disease, which attributes at least nine-tenths of all diseases to the itch.

In order, however, to do full justice to his subject, the author has discussed all these four fundamental doctrines and their immediate corollaries. We regret that we have not the space for extended extracts. He entirely demolishes the "great cause of cure" (*similia, &c.*); which was first proposed by Hippocrates, but not as an *exclusive* principle. Hippocrates also asserted that opposites are the remedies for their opposites (*contraria contrariis curantur*); and this law must hold true so far as the remote causes and morbid symptoms are concerned, and none other can apply. Rau, and other homœopathic writers, however, adopt the law of "*contraria*" as well as of "*similia*," when this is required by the circumstances of the case; and thus we see another of the foundations of Homœopathy acknowledged to be insufficient by the followers of Hahnemann themselves.

What still remains to sustain this system? The *psoric* theory, before explained!! We cannot quote Dr. Lee's remark on this topic, but will merely inquire with him, why, if the doctrine of "*similia*" is true, and nine-tenths of all diseases are produced by the *itch*—why homœopathsists do not give "*the scrapings of the skin of itch patients*," in the treatment of all these diseases, as has been suggested?"

The author demonstrates the falsity of the notion that a "disease consists in the totality of its symptoms," and that the disease is necessarily cured if its symptoms are removed. If, moreover, each case of disease is totally distinct from every other case, as homœopathsists assume, then the homœopathsist's experience in any case is of no value as preparatory to the treatment of any other. Again, the homœopathsist ought to cure *every* case, since there is no symptom or combination of symptoms which he does not profess to have a remedy to cover. Common salt, even, will produce no less than 930 symptoms, and therefore cure as many!!

Hahnemann himself is well known to have forfeited his license as an

* Our native Indians also agree with Homœopathsists in admitting "spiritual" influences in the causation and curation of diseases.

apothecary, and been subjected to heavy penalties for his quackeries, before he commenced the experiments upon which the system is based ; and Prof. Lee shows that the latter were conducted in such a way as to be totally unreliable, and that his pretended results have been found to be false by all who have repeated them since ; e. g., cinchona bark, which, as Hahnemann says, first suggested to him the “great law of cure, because it produced chills and fever in his own person,” has never produced these effects in a healthy person since, who has repeated the experiment. Thus, the very “*primum mobile*” of this system was a totally false assumption. Indeed, Dr. Routh, a homœopathic writer, explicitly states that all the symptoms obtained by Hahnemann’s experiments, “may be referred to sobriety, fasting, ill-humor, and sleeplessness, caused by continual attention to *nothing*—mixed with those innumerable sensations which crowd every hour of our life.” With this homœopathic authority on this topic, we fully coincide.

This address also makes prominent the idea, that, considering the varied and numerous powers attributed by homœopaths to each remedy (common salt has been mentioned in illustration), no remedy could ever be actually found, the symptoms produced by which in health would precisely correspond with those of any given case of disease, and therefore this “great law of cure” is always contravened in practice ; or admitting it to be possible to find such a remedy, it would be a labor of several days to become certain of the precise correspondence, during which delay it would be wrong to prescribe at all. Yet we do not find homœopaths proceeding with this extreme degree of deliberation. Moreover, a vast variety of remedies would seem to be required to suit the symptoms of different cases, as each case is assumed to be entirely distinct and different from every other. And yet in Pulte’s work, the best authority, we believe, in this country, “*aconite* is recommended in all inflammatory diseases, and in more than four-fifths of *all* diseases ; and the same is true of *arnica*, *belladonna*, *pulsatilla*, &c.”

We regret that we cannot do Dr. Lee’s address more ample justice ; but trust we have shown that it is no superficial performance. And we consider that any public medical teacher merits the thanks of the profession for setting right the minds of his pupils, so far as he may, in regard to this delusion.

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A Treatise on the Diseases of the Eye. By W. LAWRENCE, Esq. A new edition, edited with numerous additions and two hundred and forty-three illustrations, by ISAAC HAYS, M. D., Surgeon to Wills Hospital, &c., &c. Philadelphia: Blanchard & Lea. 1854.

It certainly is remarkably pleasing to meet an old friend occasionally, one whom we have not seen, perhaps, for some years; and if he should be sprucely got up, grown somewhat fatter, looking more big and important, our pleasure at the renewal of our former intimacy is much enhanced. We eye him over, and wonder much if, with external alteration, the pith and marrow, the heart and soul of the man is changed also. With much the same kind of feeling we opened the work now before us. We well remember the day when, with Lawrence and Wardrop before us, we certainly fancied we were to become a most finished ophthalmic surgeon; we can also call to mind Dalrymple's book and McKenzie's prize thesis; and we have peeped from time to time, since, into a great many other books on ophthalmological science, not forgetting Dr. Jacob's, of Dublin; but our first impressions are the strongest, and we always respect the sound doctrinal teaching of Lawrence. Dr. Hays has very industriously and successfully given to the American profession an enlarged edition of our old master's treatise, undertaken at the request of the publishers, as we are told in the preface, Mr. Lawrence having declined to revise it himself. Much matter has been added by the editor, particularly on the histology of the eye, and the minute pathology. The revelations of the microscope have been succinctly described and graphically delineated. Many of these delineations, however, are tracings from old acquaintances, seen so often as to substantiate belief in the ubiquity of human skill and ingenuity, and the comprehensive utility of wood blocks and ink. These additions add considerably to the scientific character of the work, and swell it out to a goodly size, the edition containing upwards of 900 pages. Dr. Hays' personal experience, treasured through more than thirty years, has enabled him also to contribute much valuable matter in many of the important diseases, and the introduction of all the most recent discoveries in the modes of investigation and appliances for diagnosis, form not the least valuable addition he has made. On the whole, the work is as complete as careful study and methodical arrangement can make it, and it will prove a valuable addition to every library. We have a strong desire, one which we may probably gratify on some future occasion, to cull a little from its pages for the benefit of our readers, and at the same time to notice more particularly, perhaps with friendly criticism, some of the learned editor's views; but at present must content ourselves with this brief notice, which we were unwilling to delay. The mechanical execution of the work is highly creditable, and is calculated to sustain the well-earned reputation of the publishers.

PART III.—CHRONICLE OF MEDICAL PROGRESS.

IN consequence of the great pressure of original matter, we are unwillingly compelled to omit the very interesting papers prepared for insertion under this head. It is clearly to be seen that we shall be compelled to add another sheet of sixteen pages to the MONTHLY, and that earlier than was anticipated.

PART IV.—HOSPITAL RECORDS.

THE NEW YORK HOSPITAL.

IF the Florentine adventurer, Verrazzani, could revisit the scene which three hundred and thirty years ago he contemplated with so much pleasurable curiosity, while exploring this, at that time, terra incognita, on behalf of his French employers, he could not fail to perceive and acknowledge, that there was in the spirit of man some motive influence far higher than the love of enterprise or the desire of acquisition,—that, in obedience to the great laws which Eternal Wisdom has so admirably and harmoniously instituted and arranged, he had been the exemplar to the aborigines of Manhattan, of that vast exodus of the older peoples of the earth, unparalleled in the records of time, which has proved the origin and generant of one mighty nation—the source of extension to Christianity and civilization, and a wide field of culture for the fruits of these—knowledge, benevolence, abundance.

In the growth of population, particularly when the increase is confined within narrow limits, exigencies arise in equal ratio with the natural separation of classes, resulting from the accumulation of individual wealth and the establishment of conventional distinctions. The intimate relationship and mutual dependance of rich and poor, is made manifest, in the efforts of the former to provide for and relieve the necessities of the latter, in the labor performed by the latter for the supply and gratification of the wants and desires of the former.

This principle seems to have been early recognized by the inhabitants of this city, and to have governed effectually the action of the philanthropic and wealthy among them. In 1769, when the population did not exceed 20,000, and this number being made up of a mixture of people of Dutch

and English origin, the necessity of making some public provision for the medical treatment, care, and maintenance of the sick poor, was pointed out and advocated by Dr. Samuel Bard, at the commencement of Columbia (then King's) College, in the month of May. Dr. Middleton, in a discourse delivered at the same institution in the following November, awards the credit of the first suggestion to Dr. Ward, and tells us that, in consequence of his warm and pathetic advocacy, the governor, Sir Henry Moore, commenced a subscription for the purpose, and recommended it most strongly to the attention of the legislature of the province. In 1770, many persons having contributed liberally to the fund thus originated, a petition was presented to the local government by Drs. Middleton, Jones and Bard, for a charter of incorporation, which was granted the following year, and bears date, June 13th, 1771. By this charter, the city officers, clergymen, president of the college, and a number of the principal inhabitants, were named as members of a corporation under the style of the "Society of the Hospital in the city of New York, in America." Twenty-six governors were appointed for the management of its affairs. Dr. Fothergill and Sir William Duncan exerted themselves successfully on behalf of the infant infirmary, in the city of London; and the local legislature bestowed upon it, by grant, an annual income of \$2,000 for twenty years. Land was purchased and buildings commenced, which, when almost completed, were nearly all consumed by fire on the 28th of February, 1775.

This calamity, and consequent loss, would have frustrated the benevolent plans of the Society at that time; but the legislature promptly and generously gave \$10,000 to assist in rebuilding it. The war of Independence, which took place in this year, interrupted the work and delayed its completion. During the war, the available buildings were used, sometimes as a barrack, occasionally as an hospital, by the royalist troops. The confusion and vicissitudes of warfare caused a lapse in the progress of the institution, and it was not until sixteen years afterwards, that it was in a condition proper to receive patients. The commencement of hostilities had abrogated the annuity assigned to it by the provincial legislature; but this amount was, in 1788, renewed by that of the State for a term of four years. At the expiration of this term, the annuity was continued for five years longer, and increased to \$6,000 per annum. In 1795, this amount was augmented to \$10,000, with an extension of time for three years; and by a subsequent act was further increased to \$12,500. At various times this allowance was legislated on, and, finally, permanently established until the year 1857. Such liberality, so well displayed, sheds a lustre over the legislation of those days, which, it is to be hoped, will not only become an illustrious and notable precedent to the legislators of that day, when the necessity for further action shall arise, but, in view of the rapidly increasing demands for eleemosynary

aid of this description, a powerful stimulus to a benefaction commensurate with the population then to be provided for. A due consideration of the subject will, we think, not only prompt to a continuance of a larger allowance to this particular institution, but the establishment of others in different localities, so as to meet the wants of the various portions of the city more effectually.

In 1797, the Legislature established a Lazaretto, by the impost of a capitation tax on the crews and passengers of all vessels entering the port; the surplusage, if any, over the sum required for the support of the Lazaretto, was directed to be paid on account of any seamen who might be inmates of the Hospital. All fines levied under the act for regulating the port had been previously assigned to the uses of the Hospital. An arrangement also exists by which a stipulated sum is paid by the Collector of the Port out of Hospital money received by him, for the maintenance and treatment of such seamen; this payment is stated never to have exceeded \$3 per week for each patient. A building erected on the Hospital grounds in 1806 was used as an asylum for insane patients until 1821, when another establishment was created, larger, and, in other respects, more appropriate for the purpose. This is the present asylum at Bloomingdale, which will form the subject of a separate article.

After the removal of the insane to Bloomingdale, the Directors repaired and remodeled the building formerly used, and devoted it entirely to the reception of seamen, under the name of the "Marine Department of the New York Hospital." In this department the seamen are received and treated.

The rapid growth of the city and the accumulating demands upon the charity of the institution, induced the Governors to erect an additional building situated on the north side of the grounds, now appropriated to the reception of medical cases only—the main building being occupied by the Surgical department. At the same period another building was erected on the south side. In this building is the room for the performance of cadaveric sections, very conveniently arranged for the purpose, but badly lighted. Here also is a room adapted for, and originally intended as, a lecture room, in which oral instruction might be given; it is now, however, principally used as a court-room for the coroner. The upper part of this building contains the Museum, in which there is a very fair collection of pathological preparations, casts, and models.

And here, by way of parenthesis, we would express our surprise that with the facilities within their control, the medical staff of this institution have never organized an efficient school of medicine, or, perhaps, more strictly speaking, a complete course of clinical instruction. One would imagine that the intercourse which now so freely exists between this country

and Europe, would have been a powerful means of arousing the desire to render available to the student of medicine the advantages of that species of instruction which is, of all others, the most important to him—instruction carried on at the bedside in the wards—around the post mortem table—at the shelves of the museum. The examples in Great Britain and on the Continent are now too numerous and famous to require any special notice from us. Every intelligent medical reader knows them by heart. Guy's, St. Thomas's, L'Hôtel Dieu, and Allgemeines-Krankenhaus are names familiar as household words, and have become, justly, the boast of the respective cities in which they are built, and the source of unlimited practical knowledge to the physicians and surgeons who have been educated at them. We believe that several attempts have been unsuccessfully made to effect this desirable object, and among the men who have been foremost in this praiseworthy movement, we may mention, without the risk of being charged with making an invidious distinction, the name of Dr. John Watson.

We are not sufficiently *au courant* with the medical polemics of the city, to explain satisfactorily why there should have been any failure in such an enterprise, but, if we were to hazard an opinion on the subject, we should be inclined to attribute the fact to one or all of the following causes:—A lukewarmness on the part of the Governors, or, possibly a want of proper knowledge of the value of clinical instruction to medical education; a difference of opinion, or an indifference to undertake the labor of teaching, among the individuals composing the staff of the Hospital; and, finally, the force of popular prejudice or opposing influences.

It is very true that the wards of the Hospital are open to all students who will avail themselves of the advantages they offer, and that the several medical officers do illustrate or explain the nature of important cases during their official visits. But this is not the methodical teaching which is so important and valuable to the student, and loses half its effect from the absence of professorial authority in the person who comments—the want of that link between teacher and pupil which is to be found only in properly constituted schools, where the obligation to teach and the attentive reception of instruction is mutually binding. The best evidence of this result is the comparatively small number of students who do now really walk the wards, a neglect which doubtless many of them will never cease to regret hereafter, when, plunging into the vortex of professional engagements, and encountering their first cases of dangerous or malignant disease, they find self-reproach accusing them bitterly of opportunities wasted and irrevocably lost. Such remorse, to a conscientious practitioner, must far exceed anything which the heedless and indifferent student can imagine.

The buildings originally constructed would appear to have been deficient in many respects; in arrangements for proper hygienic management,

as regards heating, ventilating, bathing, &c., due precautions were taken to remedy these defects in the buildings subsequently erected, and improvements in the main building were made from time to time, by the introduction of the Croton water in 1844, and lastly, by a well-contrived and complete system of ventilation and heating, completed in 1850.

In an interesting monograph,* published three years ago, a full description is given of the principle upon which these improvements have been made, as well as a minute detail of the manner in which the alterations necessary have been carried out architecturally, as well as the cost at which they have been accomplished. The chief ends attained have been—the admission of pure air; the supply of heat; additional accommodation; the supply of bathing water; drainage and sewerage; ventilation; night illumination; with extensive laundry appliances. Hot water and steam are the means used for heating and drying—the length of radiating pipe employed throughout the house is 13,900 feet, and the average temperature maintained during the coldest weather is about 68° or 70° Fahrenheit. “The actual expenditure on account of the heating apparatus, with all the necessary fixtures, has been \$9,319.15, and it is estimated that the whole outlay for all the improvements effected will not fall short of fifty thousand dollars; the mason’s and carpenter’s work constituting the principal items of expense.” In this paper are some very curious and interesting statements on the history of the various modes of ventilation employed in times past, as well as in connection with the earlier history of the institution. One anecdote, in relation to the latter point, is too amusing to escape notice. Speaking of the relative position of the Hospital in former times, with respect to the bulk of the city, the author tells us that “in the year 1792, Dr. Tillary, after officiating about a month as one of the attending physicians, gave as an excuse for sending in his resignation, that the institution was so far out of town, that he would be unable to continue his services without incurring the expenses of a horse and gig.” Good old Dr. Tillary, he would now probably urge the excuse the other way, seeing that instead of going into the country, at the present day, our physicians have to endure the inconvenience of an equally long drive into the midst of the busy throng, to fulfill their charitable duties.

In 1801 arrangements were made between the Governors of the Hospital and the Lying-in Hospital, to merge the funds of the latter in those of the first, on the condition that a lying-in ward should be established. This arrangement was continued for about twenty years, when the inconveniences arising from it were found to be so numerous that the compact was annulled, and the two institutions again became independent of one another.

* Thermal Ventilation and other sanitary improvements, applicable to public buildings, and recently adopted at the New York Hospital. A discourse delivered at the Hospital, Feb. 8th, 1851, by JOHN WATSON, M. D. New York: W. W. Rose.

In 1796, at the suggestion of the Medical Faculty of Columbia College, the Governors made an appropriation for the foundation of a Medical Library, to which the members of that Faculty liberally contributed, both in books and money. This library has been gradually augmented from various sources; by the purchase of Dr. Romaine's library in 1800; by the accession of the books belonging to the "Medical Society of New York," and by the purchase of Dr. Hosack's library. Various donations, and an annual appropriation by the Governors, have increased the number of volumes to something over 6,000. The character of the literature is almost exclusively professional, although there is a considerable number of works in the collateral sciences. The Library is under the control of the general board of Governors, and the management of a proper officer, whose duties are specially appointed under the by-laws. The consulting and attending physicians and surgeons are entitled to the use of the Library, for themselves and three of their private pupils; to those who may have been formerly attendant officers, or interns; to persons to whom the privilege has been especially granted by the Governors; to fee pupils of the Hospital; and to others, on the annual payment of five dollars. The books are contained in two rooms over one another, connected by a central spiral staircase, and are situated on the second and third floors of the main or centre building, the lower room being used as a reading-room. On the upper floor of the main building is the operating theatre, a semi-circular arrangement of seats and a skylight; but the lighting, in our estimation, is spoiled by the presence of a large window at the back of the operator, which, whatever may be its advantages as a side-light, throws a strong shadow on the table from those engaged around it, creates a cross-light, and destroys the effect of concentration from the skylight, which is of the greatest importance. This is a defect which might be, in part, remedied, by closing all but the upper panes of glass. "There are three several classes of persons received,*—1st. Those without the means of payment, who are received according to the judgment of a committee on their several cases. These patients, supported gratuitously, constitute an average of 40 per cent. of the whole number under treatment. 2d. Seamen paid for, in whole or in part, from the Hospital money paid under the laws of the United States. 3d. Pay patients; received at a rate scarcely sufficient to repay the mere expense of support." The increasing demands upon the institution, necessitated the erection of additional shed wards in the grounds; and led to the appeal to general sympathy contained in the pamphlet just quoted, which has been attended with so much success, that during the past year the

* Vide Address of the Governors of the New York Hospital to their fellow-citizens. New York: W. C. Bryant & Co., 1852.

north building in Anthony street has been pulled down, and a large and commodious structure is now in progress, which, when completed, will much extend the accommodations of the institution, and permit the removal of these sheds, which are neither ornamental nor well adapted for the purpose.

In our next issue we shall resume this subject, and enter upon a review of the statistics of the institution, which we shall be enabled to complete to the present time, as in the interim we may be in possession of the last annual report. The compiler of this article would acknowledge his obligations, in addition to the documents already quoted, to the pamphlet containing the charter and laws, and an account of the Hospital published in 1846, and to the several printed annual reports of the Governors, from that date up to 1853.

[To be continued.]

RECORDS.

During the last four weeks, the alternations of temperature have been very frequent in occurrence and extensive in range. There have been also a greater number of wet days than during the same period of last year. These atmospheric conditions have not existed without a prejudicial influence on the health of the city, and the mortality, in certain forms of disease. The following is a comparative statement, derived from the official returns of the City Inspector's office, which, although not as complete and otherwise satisfactory as could be desired, still afford a sufficient basis on which to found an estimate as to the general result.

For the week ending Dec. 31, the deaths were	.	.	.	482
“ “ “ Jan. 7, “ “	.	.	.	481
“ “ “ “ 14, “ “	.	.	.	483
“ “ “ “ 21, “ “	.	.	.	529

It will at once be perceived that the last week shows an increase of 47 upon the average of the three preceding ones. Now, if it could be shown that there is a proportionate increase in those diseases which are peculiar to this season, and which are chiefly obnoxious to atmospheric influence, the result would be sufficiently instructive. But in this respect the tables are deficient, inasmuch as the classification of diseases cannot be relied upon.

One fact in these returns is curious and important. We observe that, under the term dropsy in the head, the total number is 88. Now, this is either a remarkably disproportionate amount of hydrocephalus to the whole number of children, viz., 1,233, or cases of effusion within the cranial cavity, as the result of other diseases, have been most erroneously classified under this term; and such we take it is the true state of the case, for a careful analysis of the other items will show, that unless we exclude from the causes

of death among the young, some diseases to which they are known to be prone, there would not be a sufficient number to make up the whole amount, including the hydrocephalus. In another department of this number will be found some further remarks upon the subject of these tables, in reference to the returns for the whole year. We may, at a future day, expatiate a little upon the causes of the inaccuracies which are so apparent, and what appears to us to be the most feasible mode of obviating them.

The large number of deaths reported from small-pox is another topic worthy of comment. It cannot be denied that vaccination as a prophylactic is much neglected at the present day. The investigation of the causes which have produced this indifference, would afford ample matter for more extended remarks than our space will at present admit. We may possibly resume the subject.

BELLEVUE HOSPITAL.

During the last month there really has been no very great variety of disease in the medical wards, pneumonia and typhus mitior being the principal forms in which it has been exhibited; treatment has been successful on the whole, the ratio of mortality being about the average of hospital practice. There was a well marked case of pericarditis, in which the diagnosis by auscultation was fully made out and defined by the house staff, the *bruit de cuir* being very apparent. The patient is now convalescent. The rheumatic habit was inferred, although the previous history of the case, given by the patient, was by no means satisfactory.

In the surgical division an important case, in which the post-mortem appearances were of magnitude and value, was a double aneurism, true and false, of the descending aorta. The patient was admitted with a large tumor on the dorsum, under and elevating the angle of the scapula. He was a man of about 40 years of age, and had been suffering from internal pain for many years. The disease had not been diagnosed previous to his admission to the hospital. The tumor on the back did not make its appearance until about three years ago; it followed the sensation of something giving way after some considerable muscular action, and had been gradually increasing in size since. There was some difference between the rate and force of the pulse of the healthy and affected side of the body. The stethoscope did not reveal any *bruit*; but there was a distinct and forcible pulsating impulse in the tumor, which felt firm and solid, but conveyed no sense of fluctuation. He was much emaciated, respiration was considerably impeded, and the prognosis was of course pronounced most unfavorable. He died suddenly. On examination, a large aneurism of the descending aorta was discovered, which had penetrated the parietes of the thorax,

removing by absorption a portion of the 4th, 5th, and 6th ribs, with the intercostal tissues. The coats of the sac up to this point were entire, but here there was an opening, communicating with the external tumor, discovered to be a false aneurism, having for its coverings the dorsal muscles connected with the scapula; that bone with its lining muscle forming the roof of the aneurism. Rupture of the tissues forming the floor of the external tumor, at the point of junction of the two sacs, followed by evacuation of the fluid contents into the cavity of the pleura, had been the immediate cause of death. It is also presumed, and probably correctly so, that the second or false aneurism had commenced at the period when the patient complained of the sense of "giving way," and the external tumor began to develop itself. The sac proper was nearly filled with fibrinous deposition, and the upper and outer walls of the false sac were also thickly lined. There was a mass of coagulum, equal to about thirty ounces of blood, in the pleural cavity.

A case of large scrotal hernia, which had been incarcerated for three days prior to admission, was operated on by Dr. Sayre. The patient was in a state of collapse when admitted, and the scrotum and penis were hugely distended by œdema. The serous fluid was released by puncture, and the stricture cut down upon and divided. Much difficulty was experienced in returning the intestines, which were much congested, and filled with flatus and some portions of impacted fæces. The prognosis was most unfavorable; and the patient sank in 40 hours, from peritonitis.

Not the least attractive objects at this institution are Mr. Frey, the apothecary, his microscope, and his collection of histological preparations. His instrument is by Chevalier, in as far at least as the stand, arrangement of the tube, and adjustments are concerned; he generally employs the rectangular prism, and he tells us that after a careful comparison of many instruments by different makers, with the direct and bent rays, he has never been able to detect any difference, either in definition or achromacy. His mode of using the instrument is certainly one of great convenience for the observer, and permits of great freedom of manipulation of the object on the stage. The stage apparatus used by him was constructed by Grunow, with a compound movement by a simple lever, a mode vastly superior to the ordinary screw and rackwork movements. His lenses are by Spencer; and the $\frac{1}{4}$ inch objective, with an angle of aperture of 130° , is one of the most useful and satisfying crystals it has ever been our good fortune to look through; its magnifying and defining powers are of the highest order. Mr. Frey is quite an enthusiast, and really earnest student. His experience in microscopy is probably greater than that of any other man in the city, and his devotion to the study has been rewarded by great dexterity in manipulation, accuracy of definition, and familiarity with microscopical objects.

Among his extensive collection of objects, are some beautifully-accomplished minute injections; of these, we cannot forbear referring to examples of placental structure; the villous coat of the intestines, especially one of the large intestine of the domestic fowl; and some portions of the human kidney. These, we believe, were made by Dr. Gouley, one of the house physicians, and are flattering evidences of his skill and success.

WARD'S ISLAND.

In the surgical division we have this month to notice some cases of great interest and importance.

A laborer employed in the ice cellar, on descending the steps, fell from a height of thirteen feet, and sustained a compound comminuted fracture of the frontal bone. The site of the injury was to the right of the mesian line, over the orbit. On arriving at the Hospital, Dr. Carnochan found the patient lying insensible, and with all the symptoms of compression. On examination, several pieces of bone were found to be depressed; the operation of trephining was at once performed, and the depressed bone elevated, the loose fragments being removed; the dura mater and other membranes had been wounded by these fragments, and their removal was accompanied by the escape of about a teaspoonful of cerebral matter. A careful exploration showed that the fracture was more extensive than at first appeared, and rendered the prognosis most unfavorable. After the removal of the depressed portions of bone, sensibility returned, and, for four days after, the patient was able to reply to questions intelligibly and intelligently. On the fifth day, however, the symptoms became more aggravated and unfavorable in their character, and on the sixth day he died.

The post-mortem revealed the fracture extending through the walls of the orbit, the body of sphenoid and ethmoid bones, and the squamous portion of the temporal. The middle meningeal artery was torn, and under its course in the parietal concavity, and at the base of the brain there was found a very large coagulum. Indeed, it is a matter of surprise, that with such an extensive lesion, and so much pressure on the cerebrum, to say nothing of the loss of its substance, life was sustained so long. The bones of this skull are remarkably thin, a circumstance which always enhances the difficulty of the operation of trephining.

A girl of 14 years of age, admitted in the last stage of morbus coxarius, died from hectic shortly after her admission, and the post-mortem examination displayed a condition of the parts implicated, which, at the present time, when professional attention has been directed to the pathology of this disease by a recent publication, may render a description of them acceptable.

The position of the extremities, characteristic of this disease, particularly during the ulcerative stage, the affected limb being thrown across the sound one, was well marked. On removing the integumental and muscular coverings, the head of the femur was found forced backwards to the ischiatic notch. The articular cartilage of the head of the femur was gone, the bone being somewhat honey-combed by ulceration, the round ligament had been destroyed; the floor of the acetabulum broken through; the iliac and a portion of the ischiatic margin of that cavity removed; and the posterior portion of the capsular ligament wanting. Here displacement was the natural result of the muscular action on the bone, the head of which there was no barrier to oppose or restrain. The preparation is one of great value as illustrative of the pathology of ulcerative inflammation of the bony tissue, as well as the special points of the disease, when attacking this particular locality.

The third case is one of a unique character. A man of about 22 years of age was laboring under necrosis of the ulna of some standing—his constitution was beginning to yield to the local disease, which appeared to involve the whole extent of the bone. The necessity for an operation was explained to the patient, and, after some time, a reluctant consent was obtained to remove the diseased portion. Dr. Carnochan, who operated, had suggested the possibility of its being indispensable to remove the whole of the bone.

An incision was made from about an inch and a half below the point of the olecranon, along the course of the bone to within the same distance of its carpal extremity; the soft parts dissected back and the bone exposed and sawn through about $\frac{3}{4}$ of an inch from the carpal termination of the external incision. This was found to be somewhat difficult of accomplishment, owing to the impossibility of passing a chain saw between the bones. The ulna was very much enlarged at this point, and exhibited in the lower portion such evidences of disease, that the operator at once extended his incision, disarticulated it at the carpus and removed it.

The increase in the size of the bone, and the induration of the surrounding tissues, rendered the subsequent steps of the operation very tedious. Being now fully satisfied that the whole ulna must be removed, the external incision was continued to about three lines beyond the point of the olecranon, and terminated by a transverse cut of about an inch and a quarter in length. The detachment of the soft parts was then carefully proceeded with, the interosseal and external ligaments of the joint divided, and the olecranon disarticulated from the trochlea. In effecting this, a small piece of the bone was torn away by the tendon of the biceps, at its attachment. This was subsequently drawn down and removed. It was not necessary to tie an artery—a small cutaneous branch, somewhat enlarged probably by the

disease, bled, but was completely closed by pressure from the finger of an assistant, during the operation. The operation was performed on the 14th of January, and on the 24th, when this sheet was put to press, the wound was progressing most favorably. A considerable portion of the lips of the wound healed by first intention. There was a copious discharge of pus, and at one time a threatening and gangrenous aspect of the remaining part; this, however, passed off, and healthy granulations are now sprouting up abundantly. The constitutional condition of the patient has much improved, and everything bids fair for a favorable termination to this, we believe, the first case on record of resection of the entire ulna. Sensation in the parts is perfect, and, as far as can as yet be ascertained, the motion of the joint remains unimpaired.

PART V.—EDITORIAL AND MISCELLANEOUS.

THE ANATOMY BILL.—From the daily papers we learn, that on the 17th of January, in the Senate of the State of New York, the following bill passed its third reading, and was sent to the Assembly :

“AN ACT TO PROMOTE MEDICAL SCIENCE. *The People of the State of New York, represented in Senate and Assembly, do enact as follows :*

“SECTION 1. It shall be the duty of any Warden, Superintendent, Governor, Commissioner of the Almshouse Department, or other officer having in charge any of the prisons, penitentiaries, or almshouse departments of the State, supported entirely at public expense, and located in cities whose population exceeds thirty thousand inhabitants, to deliver to any regularly chartered medical college or school in the State, on application from the trustees or teachers thereof, for the purposes of medical and surgical study, the remains or body of any person dying in any of the aforesaid institutions under their charge ; provided that the said remains shall not have been claimed or demanded for interment by any relative or friend of said deceased person within twenty-four hours after death ; in which case said remains shall not so be delivered, but shall be interred in the usual manner.

“SEC. 2. The remains or bodies of such as may be delivered to the medical schools and colleges, as aforesaid, shall be used for the purposes described in this act, in this State only ; and whoever shall remove such remains beyond the limits of the State, shall, on conviction, be adjudged guilty of a criminal offence, and shall be imprisoned in one of the State prisons of this State for a term of not less than one year.

“SEC. 3. All laws inconsistent with this act are hereby repealed.

“SEC. 4. This act shall take effect immediately.”

The following remarks upon this topic, intended for the January number of the MONTHLY, were excluded by the press of other matter. We hardly venture to anticipate so speedy an action upon this bill, important as it is, as to make these observations too late to be appropriate. Certainly, we should be only too much pleased to have them rendered valueless by the passage of the bill which we have copied.

There are certain of those branches of knowledge which in their combination constitute medical science, which are more primarily important than others. Thus, the study of medical substances, whether from the organic or inorganic world, should confessedly precede any attempt to administer them as remedies. So clear, indeed, is this proposition, that it needs no argument. Now, of all the primary branches none is so generally fundamental as is the study of anatomy. It is by its teachings that the physician learns where and what are the organs and tissues found in given regions. It is by its teachings that the obstetrician learns what are the organs and tissues concerned in the parturient process, and what is necessary for the safety of all. It is by its teachings that the physiologist learns what are the conditions of health, so far as structure is concerned, and what are the various organs provided for the performance of the healthy functions; and from its data the pathologist learns to estimate the visible departures from health of the human body. It is also from anatomy alone that the surgeon can learn how to place a fractured bone, so that it shall become again fit for service to the individual; or to guide his knife so as safely to remove all that may be threatening sooner or later to destroy life, and thus, while endeavouring to save from death, to avoid instantly causing it. Operative surgery, in fact, is only the dissection of a living body to a more or less limited extent, requiring for its successful performance a knowledge of the same dissection in the dead body.

Thus, anatomy underlies the whole of the superstructure of medical science, and without its pursuit all the other branches would be able to bring only empirical results as their contributions to medical knowledge.

Notwithstanding this fact, and although the necessity to the community of thoroughly qualified practitioners of medicine is everywhere acknowledged, there are to-day only two States in our Union in which the study of anatomy, if carried on at all, can be so without an illegal connivance on the part of the executive authority, or in spite of that authority. The ill effect upon young men of such influences are not at all likely to be over-estimated, and are especially to be deprecated in communities where law-abiding citizens are of so great value. That attempts to legalize anatomical pursuits should have been frustrated by the barefaced demagogism which seeks for the support of the poor by arraying their prejudices against the rich, is a thing credible only because we know that it has occurred in other States,

and in other countries. That, by means of false allegations and assertions as to the reasons on account of which the bodies of certain persons are to be devoted to the increase of knowledge, some men have ridden to prominent position and extended notoriety, is a fact but too well known. We cannot believe that at the present time we have anything to fear from this source; but, for fear that the argument may not be fully understood, we quote a speech made by the eminent reviewer and debater, Mr. Macaulay, when the same subject was under discussion in the English Parliament. We quote this speech because it was made by a person not connected with the medical profession; by one whose interest could not have warped his judgment; by one who, standing as he does among the very first as a clear thinker, a cogent reasoner, and a forcible debater, is entitled to have his opinions received with respect, and their force well considered, before they are rejected; and because, where so great a man treads boldly and safely, lesser ones need not fear to follow.

We preface the quotation, however, by the following extract from the *London Examiner*, referring to the same speech:

“We are carried back to the time when the training of skilled surgeons by a licensed practice of dissection was held by large numbers to be a grievance of the poor! When a cause is once accepted as right by all parties, it is not easy to comprehend the temper in which it could have been at any time contested. It is most difficult, therefore, to carry our thoughts back to the days of that dispute on the Anatomy Bill, and yet, now that twenty years’ experience has fully exposed the folly with ourselves, we may see the Americans still refusing to allow anatomy to be studied by their surgeons in the only safe or effectual manner.”

We do not need italics to call attention to the too just reproof contained in the last sentence.

But we detain our readers from Mr. Macaulay’s elegant argument, to which any of our own words would be vainly appended.

“Sir, I cannot, even at this late hour of the night, refrain from saying two or three words. Most of the observations of the hon. member for Preston I pass by, as undeserving of any answer, before an audience like this. But on one part of his speech, I must make a few remarks. We are, says he, making a law to benefit the rich, at the expense of the poor. Sir, the fact is the direct reverse of this. This is a bill which tends especially to the benefit of the poor. What are the evils against which we are attempting to make provision? Two especially; that is to say, the practice of Burking and bad surgery. Now to both these the poor alone are exposed. What man, in our rank of life, runs the smallest risk of being Burked? That a man has property, that he has connections, that he is likely to be missed and sought for, are circumstances which secure him

against the Burker. It is curious to observe the difference between murders of this kind and other murders. An ordinary murderer hides the body, and disposes of the property. Bishop and Williams dig holes and bury the property, and expose the body to sale. The more wretched, the more lonely, any human being may be, the more desirable prey is he to these wretches. It is the man, the mere naked man that they pursue. Again, as to bad surgery; this is, of all evils, the evil by which the rich suffer least, and the poor most. If we could do all that in the opinion of the member for Preston ought to be done,—if we could prevent disinterment,—if we could prevent dissection,—if we could destroy the English school of anatomy,—if we could force every student of the medical science to go to the expense of a foreign education, on whom would the bad consequences fall? On the rich? Not at all. As long as there is in France, in Italy, in Germany, a single surgeon of eminent skill, a single surgeon who is, to use the phrase of the member for Preston, addicted to dissection, that surgeon will be in attendance whenever an English nobleman is about to undergo a critical operation. The higher orders in England will always be able to procure the best medical assistance. Who suffers by the bad state of the Russian school of surgery? The Emperor Nicholas?—By no means. But the poor dispersed over the country. If the education of a surgeon should become very expensive, if the fees of surgeons should rise, if the supply of regular surgeons should diminish, the sufferers would be, not the rich, but the poor in our country villages, who would again be left to mountebanks, and barbers, and old women: to charms and quack medicines. The hon. gentleman talks of sacrificing the interests of humanity to the interests of science, as if this were a question about the squaring of the circle, or the transit of Venus. This is not a mere question of science—it is not the unprofitable exercise of an ingenious mind—it is a question of care and pain. It is a question of life and death. Does the hon. gentleman know from what cruel sufferings the improvement of surgical science has rescued our species? I will tell him one story, the first that comes into my head. He may have heard of Leopold, Duke of Austria, the same who imprisoned our Richard Cœur-de-Lion. Leopold's horse fell under him, and crushed his leg. The surgeons said that the limb must be amputated; but none of them knew how to amputate it. Leopold, in his agony, laid a hatchet on his thigh, and ordered his servant to strike with a mallet. The leg was cut off, and he died of the gush of blood. Such was the end of that powerful prince. Why, there is not now a bricklayer who falls from a ladder in England, who cannot obtain surgical assistance, infinitely superior to that which the sovereign of Austria could command in the twelfth century. I think this a bill which tends to the good of the people, and which tends especially to the good of the poor. Therefore I support it. If it is unpopular, I am sorry for it. But I shall cheerfully take my share of its unpopularity. For such, I am convinced, ought to be the conduct of one whose object it is, not to flatter the people, but to serve them."

DEATHS IN NEW YORK CITY DURING THE YEAR 1853.

THE vital statistics of any locality are invaluable. Mortuary tables, when carefully kept, are the public body's pulse, clearly indicating the

strength of the heart. This city is in enjoyment of a law, passed by the State Legislature last winter, which requires full and prompt returns of the births, marriages, and deaths, occurring. The city inspector, into whose hands all these returns come, makes monthly report of them, and inasmuch as their accuracy is rather more than is usually provided for, it will not be many years before we shall have a body of statistics, to which physicians, philosophers, jurists, statist, and actuaries may appeal with a moderate assurance of correct data, for the solution of the great problems which they all are engaged upon.

Under a law of much greater age, we are furnished from the same office—that of the city inspector—with an annual statement of the total number of deaths during the year, the proportions of males and females, adults and children dying, their nativity, the causes of deaths, the ward in which they occur, and the number from each disease during each month of the year. These, as not only every physician, but every intelligent man of whatever calling, will see at a glance, must be of the profoundest service to medical science, only providing they are reliable. Of course, it will not do for actuaries, having discovered the average length of life, as revealed by these tables, to fix therefrom the rates of our annuities and life insurance premiums. New York being the great depot for European emigration, and the hospital for their pauper sick, it would be obviously unfair to insist that the average of life, as given by our tables, which are indebted to this importation of foreign disease for most that is startling in them, is all that the quiet dwellers in comfortable and airy quarters of the city, or they who breathe the refreshing and rejuvenating fragrance of country fields may expect. But knowing from them the extent of mortality here, it is easy to sound a needed alarm and direct into the thirsty channels the accumulated streams of benevolence. Knowing that it is principally among children that diseases, for which Fate scarcely calls, are ravaging, it is practicable to direct to them the attention of those who will instruct parents as to the wants of their little ones. Knowing in what quarter the greatest mortality is found, it is practicable to discover whether the thickness of filth, garbage, and dirt in the streets is a fair gauge to the violence of disease, and, discovering it, to fill the ears, if not arouse the stolid understanding of city fathers, and those generally whose duty it is to keep the city clean and decent in all its thoroughfares.

As to the accuracy of these reports. Perfection is not looked for in anything human. And in a matter which involves the joint labors of many men, it is always safe to append to the affidavit of accuracy, the customary “errors excepted.” But when men are salaried for the work, and they possess medium intelligence and industry, we are warranted in expecting a near approximation to the exact truth of their statements. And to our

city statistics, doubtless there is to be given quite as much confidence as to similar tables from any portion of our country. Our inspector is accurate, prompt, and energetic. Were he—as, when the people are wise, he always will be—a physician, and one of the best that could be induced to occupy the position, his department might do infinite good to the city, where now, it only fulfils the letter, not at all the spirit of its functions. Since nobody can be buried without the permit of the inspector, issued on the receipt of the certificate duly signed by the attending physician, we know that the returns must be accurate as to the number of the dead. The looseness is in the names given to the diseases of which they die. This is the fault of physicians almost alone. Sometimes a mere symptom, and one compatible with very good health, is returned as the cause of death. Sometimes a general term is given large enough to embrace half the catalogue of diseases. Sometimes a miserable cross of a Greek and Latin name, such as no lexicon ever recognized, and of which no Christian would ever dare to die; and, sometimes, a nursery term, not understood at all “in the books,” and to explain which, would set the best of students to blushing and blundering before the most courteous board of examiners. Much of this trouble would be overcome if the inspector, taking advice of competent medical authority, would cause a system of monography to be printed on the back of his blank certificates of deaths, with the request to the one who signs it to conform his return to that formula. But far more will be done when our medical colleges insist upon it that their graduates shall be men competent to fill up a blank certificate truly and elegantly.

The Inspector's Report covers one year, ending with the last day of December. It is not presented to the Common Council until some time in February, and, some weeks after that, is published. In the following table,* we anticipate the official report, having collected the figures by a comparison of the weekly returns from his office, as published in the daily papers, and of those for preceding years. This comparison of the ravages of our principal diseases will, it is believed, be instructive.

From this, it would appear that apoplexy, after gradually increasing during seven years, suddenly, during the one just passed, drops down some 250 in the number of its victims. But this may be explained on noticing that the very indefinite term “congestions,” which is given as the cause of 269 deaths in 1852, has the credit of 731 deaths in 1853; under its head being included several hundreds of those who have heretofore been recognized as apoplectics, and all those who fell during the “hot weeks” of the summer from “sun-strokes.”

Bronchitis *appears* to have doubled its frequency of fatal attacks. Possibly it has, but it must be remembered that much light has been shed upon

* See end of Article, page, 157.

this subject within a few years ; that many, who ten years ago would have been called "consumptives," now die with precisely the same disease, called by another name ; and, moreover, that *Bronchitis* is a fashionable distemper. The diseases of children, as shown by the figures following the heads Cholera Infantum, Convulsions, Dropsies, (for the larger portion of these are indicative of the "dropsy on the brain," which is the last symptom in many children who die of difficult dentition,) and Marasmus, though frightfully large, yet are not as much increased on the numbers of 1852 as would have been warranted by the increase of our population. As a very large proportion of the children dying under one year of age are the children of emigrants just arriving, the fact that during the year 1853, 16,047 fewer emigrants were landed in New York than in 1852, will sufficiently account for the slight decrease of infantile loss of life. Consumption, cloaking as it does many series of cases which were utterly ignorant of a tubercle, besides the ignorance and indolence of the physicians who employ the term to hide their unskilfulness and lack of success, increases faster than our population. From fevers we have been especially free. From diarrhœas and dysenteries we have had a comparative immunity. From measles and scarlet fever, in their fatal forms, we have been strangely preserved. But small-pox had 130 victims more than in 1852 ; 83 more than in the fatal year 1824, which was so long remembered with horror. If Jenner had never lived, if the protective power of vaccination had never been demonstrated, if we lived in a community which never boasted of its intelligence, of Christian philanthropy, it would be well for us to deplore this waste of life from small-pox with unfeigned, though imbecile sorrow. But with its preventive in our hands, the power almost, if not entirely, to banish it from the list of our diseases, it is a burning shame to us and a world-wide disgrace that we still suffer its ravages. Let some plan of universal vaccination be devised, compulsory, if necessary ; the convicts and gold-hunters of Australia set us a worthy example in this matter, having already, into their Colonial Parliament, introduced a bill compelling vaccination. Let our Alms House Governors erect a roomy and worthy hospital for small-pox patients, to which the sick from Alms House or Prison, or from the city, may be removed so soon as suspected, with apartments so distinct and in so good repute, that the boarder at our most fashionable hotel may gladly escape to it on finding that he is likely to prove an offence to his fellow-boarders. No better place could be provided than the one already selected for the purpose, on the extreme western point of Blackwell's Island. Let, lastly, an office be opened on this side, and convenient modes of transportation devised, so that the infected person will not be under the necessity of travelling several miles in a railroad car, omnibus, or steamboat, in close contact with the uninfected, before reaching his asylum.

The total number of deaths during the year, in this city, was 21,920,—319 more than in 1852. The disproportion of deaths among males and females is quite remarkable—of the former there have died 11,821, of the latter 10,099. The disproportion of births, however, is equally curious.

The months show a great difference in their mortality. In August, it was 2,689, in May, 1,291, less than half as great. The following table will exhibit the deaths in each month, the most fatal taking the lead, and each following in the order of its fatality :—

August,	. . .	2,689	June,	. . .	1,520
July,	. . .	2,551	February,	. . .	1,520
December,	. . .	2,116	November,	. . .	1,513
October,	. . .	2,067	March,	. . .	1,501
September,	. . .	1,920	January,	. . .	1,406
April,	. . .	1,826	May,	. . .	1,291

Of the nativity of the deceased, it may surprise some to learn that 14,437 are returned as natives of the United States. But it must be remembered that out of this is a very large number of children dying while under a year of age, whose parents landed but a few weeks or days previous to their children's birth, from emigrant ships. The infants are *natives*, of course, but their return in this way is apt to mislead us into the opinion that the city is far more fatal to native life than it really is. Next to our own people, Ireland contributed 4,206 to the year's mortality; Germany, 1,576; and England, 582.

The whole number dying at our public institutions was 3,133, not including those at the Marine Hospital on Staten Island, and at Quarantine. These latter are only reported through the Commissioners of Emigration to the State Legislature. The deaths on Ward's Island were 1,100; at the City Hospital, 399; at Bellevue, 547; on Blackwell's Island 349,—including 119 at the Alms House, 117 at the Penitentiary, 22 at the small-pox shanty, 90 at the Lunatic Asylum, and 1 at the Workhouse. The number of colored persons dying, during the year, was 464.

There is another branch of these mortal statistics into which the curious might look, and, faithfully reporting, do good service to the State. The Inspector's returns show the number of deaths in the different wards of the city. Of course, many things beside are to be taken into account, but we surmise that it would still be found that those wards which the Street Inspectors are most fond of leaving to fester in filth and heaps of decaying garbage, are uniformly the most visited by fatal sickness. The last quarterly return of the English Board of Health gives great prominence to the fact that wherever the cholera has gone, it has always been into the dirtiest corners, often visiting the same houses where it proved most deadly at its previous visitation, following uniformly the courses of the uncleansed alleys, and harboring in the rooms adjacent to the spots whence issued the most

noisome effluvia of human ordure, and putrifying animal matter. This gives us reason to suspect that the common impression that *vegetable* decomposition alone is deleterious to health, needs some slight modification. To us it is an immediately practical question. The great plague of our race is already only separated from us by a sea that is bridged almost daily. It is afloat continually between our own and the European coast. It has effected its lodgment even here, and shown its ugly form on several death-beds. Whatever sanitary regulations can do to preserve the city from cholera during the coming summer, must be done quickly. And physicians are the ones upon whom the duty devolves of enlightening the public mind as to what should be done, and urging upon those in power the duty of doing it. The weekly returns furnish at once the text and the authority for the pertinent appeals of the medical philanthropist.

††

TABLE.

	1853.	1852.	1851.	1850.	1849.	1848.	1847.	1846.	1845.
Apoplexy,	404	653	659	572	562	421	445	400	383
Bronchitis,	277	230	254	132	159	170	139		
Cholera Infantum,	890	915	721	713	926	505	692	527	563
Cholera Morbus,	74	238	102	44	241	43	44	34	19
Consumption,	2723	2487	2374	1928	2086	1869	1926	1698	1659
Convulsions,	1909	1680	1592	1288	1426	1193	1023	879	771
Croup,	691	595	462	356	292	319	271	190	220
Debility,	458	468	429	343	484	396	512	199	140
Diarrhœa,	678	567	743	473	783	432	588		
Dropsies,	1322	1335	1206	1048	977	851	780	769	
Dysentery,	750	774	1193	792	1256	739	657		
Erysipelas,	137	156	205	186	172	155	249	162	149
Scarlet Fever,	448	613	627	311	266	93	142	114	63
Typhus and Typhoid,	532	758	1102	472	606	943	1396	256	174
Other Fevers,	491	526	556	434	546	539	614	312	
Heart Disease,	231	276	273	263	242	217	174		
Whooping-cough,	183	187	114	180	112	213	86	214	89
Inflammation of the bowels,	430	483	537	433	531	499	441		
Inflammation of the brain,	455	442	418	335	366	263	266		
Inflammation of the lungs,	1031	1062	1263	924	926	708	748	573	753
Marasmus,	949	971	1051	746	764	680	688		
Measles,	127	246	320	324	125	77	275	17	137
Small-pox,	627	497	562	231	326	544	53	141	425

MODERN GERMAN MEDICAL LITERATURE.—It is the purpose of the conductors of this Journal, through their German correspondence and translations made expressly for it from the best German periodicals, to give its readers everything of interest and value which may emanate from the distinguished medical writers or scientific bodies of that country.

Very few medical men, comparatively, in this country, are aware to what extent their science has been indebted to German minds, and still fewer have any precise knowledge of the rapid advancement in the various departments of medicine and the collateral sciences which has been, and which is still being made in that country.

Two principal reasons for this want of knowledge have existed. First, with almost a single exception, the medical journals of this country have not, to any extent, translated the German journals; and, since comparatively few medical men read the German language at all, we have been obliged to obtain our knowledge of medical progress in Germany mainly from English periodicals, and garbled extracts from them. Secondly, the English periodicals even, have generally been very tardy, in our judgment, in acknowledging the high value of the contributions to practice, and especially to science of the German medical journals.

A direct access to the contents of the German periodicals will be afforded to the readers of the Monthly, as just explained; the labor of translation has been assumed by a medical man thoroughly qualified for the task—Dr. H. N. Bennett, of Bridgeport, Ct. For the condensation and arrangement, however, of the materials thus obtained, the conductors alone will be responsible.

It is with pleasure also, that we see the best English journals of late giving more prominence to this great source of medical progress. And the following extract from the London Medical Times and Gazette, for September, 1853, is quoted, as also expressive of our own appreciation of the value of German medical literature of the present day.

“The spirit of philosophic research which produced such brilliant results in the French schools, during the earlier years of the present century, appears within latter times to have taken its highest development at the eastern side of the great frontier of the Rhine. In these observations we wish it to be clearly understood, that we no more undervalue the labors of the rising French schools, the successors of the Breschets, the Dumas, the Andrals, the Rouxs, and the Lisfrances, than we do those of the predecessors of the modern German observers, in their respective departments of science. But while we fully recognize the philosophic zeal and real genius of such men as Bernard, Wurtz, Becquerel, Nelaton, Gosselin, and their compeers, both in Paris and the French provincial cities, we believe we are justified in saying, that at no period, have there ever been so many able, zealous, and enthusiastic minds devoted to the advancement of the science of medicine in all its departments, direct and collateral, as there are now to be found in the numerous schools of Germany. Many of these men are still young, many of them with European, we may say, with world-wide reputation, only now in the prime of life and manhood.”

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POCKET PROBANG.—A private note from a medical friend has been received, which contains a description of a very convenient series of instruments for making applications to the throat and air passages. Although he promises a more complete description of them, as well as illustrations, which might be more striking to the eye, we do not feel justified in withholding them from the profession, for fear something may prevent the fulfilment of the promise. Any one, who, either in the city or the country, has been

obliged to carry with him the long probang, with the fixed sponge, will appreciate the convenience of this jointed instrument, with its simple, but effective contrivance for changing the sponge, as well as serving for a port-caustic.

"Since the publication and general circulation of Dr. Green's works on 'Diseases of the Air Passages,' and on 'Croup,' the treatment of these diseases, according to the plan recommended in those books, has become an important item in private practice. To those physicians who have adopted this practice, it is a desideratum to have instruments which are *portable*, and at the same time adapted to the performance of those delicate operations often necessary to insure success.

"For some years past I have been using a number of instruments, contrived by myself, and manufactured by an ingenious cutler in Albany, which combine qualities quite desirable to a general practitioner.

"One is a port-caustic, made of silver or platina, and attached to a curved whalebone rod,—for the purpose of cauterizing ulcers upon the epiglottis and other parts of the throat.

"Beside this, there is a *set* of five or six instruments, for holding both sponge and caustic, made of steel wire, all attached to the same handle by a screw, and removable at pleasure.

"The sponge-holder is made of small steel wire, with a long slit at the end to receive the sponge, the inner face of the slit being made rough, with a flat ring to slide down and hold it firm, the other end being adjusted to an ivory handle. There are three of these sponge-holders, one straight, the others curved.

"The two caustic-holders are similarly constructed—with a slight difference at the slit end—and adjusted to the same handle.

"The whole apparatus is simple, safe, cleanly, and portable."

DR. MARSHALL HALL.—This distinguished *savant* was in New Orleans during the month of January, and, with that zeal in the pursuit of information upon the functions of the nervous system, for which he is distinguished, made a series of experiments upon alligators. As they have been supposed to manifest some phenomena discordant with his theories, we give below the notes taken at his vivisection, believing that our readers will be interested in them. We learn that from New Orleans Dr. Hall will go to Havana, and thence return to this city.

Dissection of a small Alligator by Dr. M. Hall.—Jan. 13. Animal decapitated below the medulla oblongata, thorax and abdomen completely eviscerated. Spontaneous motion evident in the head; suspended in the trunk and extremities. Extremities excited, much irregular motion.

Head excited, much muscular motion thereof. Cornea touched, palpebræ closed. Motion of head upon touching medulla-oblongata. Nostril touched, mouth opens and all the muscles of the head contract.

Trunk first suspended by a hook, then placed under the edge of a knife—no after motion perceptible. The trunk suspended by hooks introduced near the sphincter ani, remained perfectly motionless for several minutes.

Trunk divided into three parts. Upon irritating the skin of either of the three, *violent contractions*. Superior points of amputation of each being irritated, little or no motion. The upper part of spinal marrow of each portion being irritated, muscles below contract.

The experiments showed, *spontaneous* and *excited* motion in the head; *excited* motion only, in the extremities.

(FROM OUR CORRESPONDENT.)

Boston, Nov. 30th, 1853.

The winter term at the Massachusetts Medical College opened Nov. 2d, with ninety students,—the number has since increased to about a hundred, the average number for the last ten years. Dr. John Ware, Professor of Theory and Practice of Medicine, has been suffering for some time with hepatic disease; he is now, however, recovering, and will be able to commence his lectures at the college in a few weeks. At the McLean Hospital the number of patients, both in the medical and surgical wards, is unusually small. The state of health in the city is good. The continuance of mild weather so much beyond the usual season, has produced considerable typhoid fever, but the cases are generally of a mild type. At the City Registrar's, the table of mortality shows a slight increase in the number of deaths during this month over that of last year, and for the entire year the number of deaths is five hundred more than in 1852. There has been no prevalent epidemic or unusual amount of sickness, and the increased mortality is due, without doubt, to the influx of foreign population.

The House of Industry at South Boston has been closed, and the inmates removed to Deer Island. This will unite the two institutions which the city have sustained for the care of the poor. Many advantages will be gained by placing all that class under one superintendent. A large building was erected a few years ago, capable of containing twelve hundred inmates. It was found, when too late, that no adequate means of ventilation had been provided, and that it was entirely unfit for the reception of the class of people for whom it was erected. Since that time, the city has spent large sums in repairing the errors of the architect. The moral which ought to be impressed on all city governments from the mistakes mentioned above is, that no public building for the reception of the sick, or any other inmates as a dwelling, should be left to the discretion of an architect, without the supervision of proper medical authorities.

Dr. Lathrop, formerly assistant physician at the institutions at Deer Island, has been appointed superintendent of the State Hospital for paupers at Rainsford Island. All the public institutions for the support of the poor here, are now under the direction of physicians. The advantages of this arrangement will be apparent to those who have experienced the difficulty of carrying out any sanitary measures, where the direction of things is in the hands of non-professional men, who cannot be made to comprehend their necessity when balanced against their ideas of economy. Besides this, there is a peculiar fitness in this country, where pauperism and bodily or mental infirmity are almost always joined, in putting all institutions for the reception of this class on the footing of hospitals.

Dr. S. Durkee has lately found the *sarcina ventriculi*, a species of cryptogamic algæ, in pus taken from a lupoid surface in the nose. They were first figured by Prof. Goodsir, of Edinburgh, but have never before been observed in this country. The same indefatigable microscopist has lately exhibited muscular fibrillæ taken from the thorax of the mosquito, and destitute of the myolemma which is found in all other muscular fibril. The instrument used by him is one of Spencer's.

DR CARNOCHAN'S CASE OF EXSECTION OF THE ENTIRE ULNA .

DISEASED RIGHT ULNA, - EXACT SIZE ,

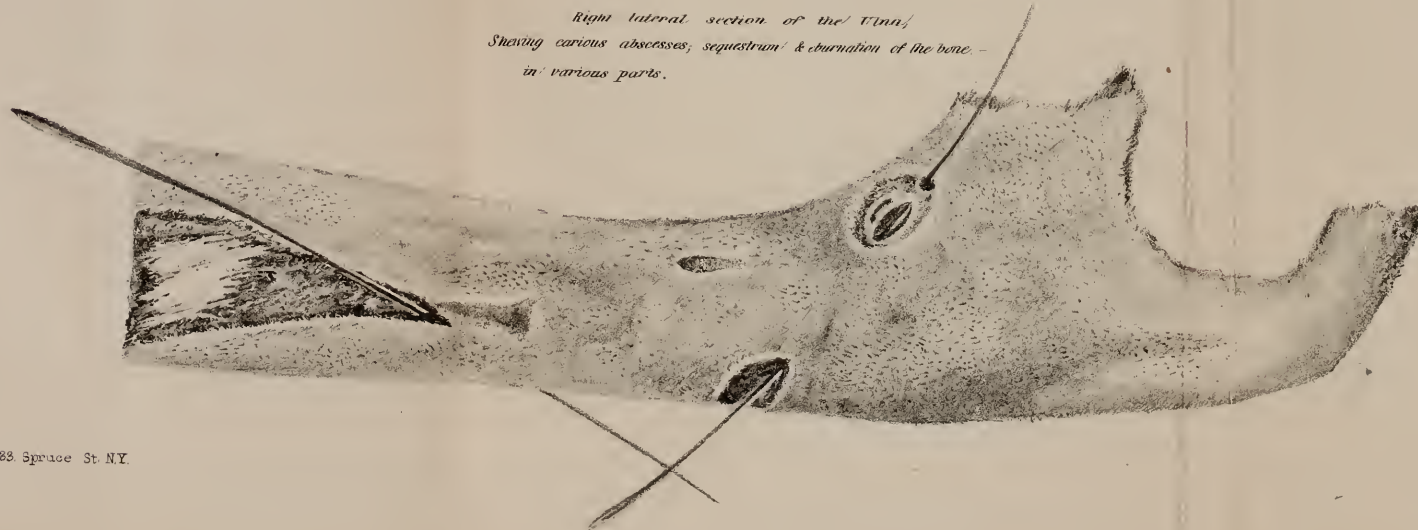
FIG. 1.

*Shows cleavage, enlarged oval & round foramina; & acicular & mammillated formations,
on the surface of the bone.*



FIG. 2.

*Right lateral section of the Ulna,
Showing carious abscesses, sequestrum & burrification of the bone -
in various parts.*



THE AMERICAN MEDICAL MONTHLY.

MARCH, 1854.

PART I.—ESSAYS, MONOGRAPHS, AND CASES.

Chloroform in Delirium Tremens—report of ten cases. By W. M. CHAMBERLAIN, M. D., Astoria, L. I.

Few men who have not “written a book” upon the subject, are satisfied with the pathology of the nervous system. In reviewing the literature of Delirium Tremens, we are obliged to conclude that terminology has been indefinite, diagnosis inexact, pathology inadequate, and the net result confusion and uncertainty.

Eberle and Coates tell us, that whatever the disease may be, insomnia is its index; that stimulus is unnecessary; that opium is the *remedium magnum*; and sleep, *coute qui coute*, by its power, the indication. In a neighboring hospital, Dr. Gerhardt taught that nervous depression is the key to all the phenomena; and support, by stimulation and nutriment, the one thing needful. Dr. Klapp and others support a different theory, if we rightly interpret a practice which admits of giving 30 grains of tart. ant. et potass. in the course of a few hours. Consistently they add, free “venesection is a useful adjunct.”

Again, we are told that the disease is simply poisoning by alcohol. Elimination by the skin and kidneys is the cure. The physician prescribes a bucket of cold water and a tin cup; nature supplies the appetite; all indications are thus easily answered, and recovery is almost certain.

Another says that the disease is self-limited, and “let it alone” is the corollary.

One finds phrenitis or meningitis pretty uniform, and “exhibits” a coronet of leeches, the ice cap, cold affusion, and blisters. Another sees

the exciting cause in depraved secretions, retained bile and urea; and calomel with diuretics is his sheet-anchor.

One insists that recumbency is indispensable, and compares the value of bed-straps and straight-jackets; a second orders the largest liberty of speech and motion; and a third, alive to the necessity of relieving the brain by the muscular system, visits his patients with a rope's end. Spearmint-tea is remembered as a specific by older practitioners. Assafetida, valerian, camphor, ether, and chloroform have had their devoted partisans, who sought nothing further from the pharmacopœia. The results of the same methods in different hands have been distractingly various. An eminent man, in charge of one of the largest and best lunatic asylums in the country, tells us that under the "let-alone" plan, he has lost but one patient in seventeen years, and that one moribund at admission; while one of our city institutions, retaining splendid medical skill, in its annual report for 1852, admits 27 deaths from Delirium Tremens. Another hospital, in a distant city, reports for 1853, 162 cases of Delirium Tremens and 88 of debauch, admitted; and in this number, 52 deaths of Delirium Tremens. If all certificates of death from "apoplexy," "epilepsy," "congestion of the brain," &c., by which credit and the feelings of friends are wont to be shielded, could be carefully analyzed, unexpected statistics would appear.

What is to be said of such diversity? It cannot be supposed of many of the modes of treatment above enumerated, that they were inapt to the particular cases upon whose favorable issue their credit stands; or that, in those cases, the particular medication was a matter of no importance. We may not so stultify our teachers. It must be concluded that different authors, giving their own experience in different forms of disease in the drunkard, have claimed a generic name for widely differing conditions. The fatuous insanity of intoxication, the sthenic delirium-e-potu, the spasm and epileptiform convulsion, which mark the toxic effect of alcohol on the surface of the brain; the true Delirium Tremens, with prostration and anæmia of the cerebral mass; the slow paralysis of intellection and motion deepening into coma, which attends retention of bile and urea; the pain and peculiar delirium of cerebritis; and the persistent vigil of mania, have been confounded, perhaps not in the mind of the Physician, but certainly in the definitions of the Author. They do, indeed, so alternate and complicate each other, as to tax to the utmost the most acute observation, and the best-instructed judgment. Though we may well doubt whether the elements of present science have been sufficiently appreciated, yet the hope of a complete rationale and therapeutics of logical induction must be deferred to another age. Suggestions to be elaborated and facts to be compared, are present desiderata. With this feeling, we are disposed to offer some cases, observed and imperfectly recorded without any view to such a report.

They are extracted from our "Case Book," not as a challenge to criticism or a buttress to any theory, but in the hope that they may illustrate the use and power of the great narcotic, Opium, and the greater sedative, Chloroform. In some of them these agents were employed almost without stint or limit, and the effect, in suspended and restored animation particularly, we have not seen elsewhere so fully detailed. They occurred in the Penitentiary Hospital on Blackwell's Island, under the direction of Dr. Wm. Kelly, late Resident Physician, in whose fate, cast-away upon the Atlantic, while we now write, the many who have loved and honored him feel a deep and painful interest.

A few belong to the period, since Dr. K.'s resignation, during which the writer held the medical charge of the Island. Most of them were observed and treated by himself personally, a few by associates in duty there.

During the year 1853, 960 persons, in the various stages of debauch, were sent to the Hospital by the police courts of the city. Almost uniformly such belong to the lowest class in society—prostitutes, thieves, "fighting men," and broken-down vagabonds, who revolve in fixed orbit through their dens of vice and the charitable institutions of the city. Excess, privation, exposure, and chronic disease, are the staple facts of their lives.

They arrive at the Hospital generally on the second, often on the third day after they have been arrested, or picked up by the police. Meantime they have been confined in the station-houses and in the "Tombs," in cells often dark, cold, wet, and comfortless; cut off from all stimulus; unable to take, and sometimes to find, food; oppressed with their degradation, a prey to "horrors," and the scarcely less horrid vision of months of imprisonment. It is not strange, then, that a large number of aggravated cases of Delirium Tremens occurs among them. Of the 960 mentioned above, but 200 are counted on the books of the Hospital as cases of Delirium Tremens. It was intended to exclude from this list every equivocal case; and of the remaining 760, credited with debauch simply, it is believed many might, with much propriety, have been counted as subjects of the graver malady.

It may not be amiss to introduce the elements of an average case of debauch, in this connection. They are somewhat as follows:—

A. B. presents herself at 5, P. M. She is pale, weak, and tremulous. Has been drinking constantly and largely for a week. Since her arrest, 36 hours have elapsed. She has had no sleep, and has been unable to take food. Her pulse indicates irritation and asthenia. The skin is cool, the tongue moist and pale. Last night she suffered frightful hallucinations. She craves liquors, dreads the coming night, and fears she shall die. From the warm bath, she is removed to a warm bed. Three pints of warm infusion of hops are given her. This acts gently but effectually in three ways: first, as an emetic; second, as a diaphoretic; third, as a hypnotic.

When her stomach is quiet, after the vomiting, two or three compound cathartic pills are given her. An hour or two after, she is offered some bread and tea, or some beef-tea; and still later, is required to drink a full draught of ale, containing a drachm of laudanum. Early in the night, she sinks into comfortable sleep, which continues late in the morning. The bowels move, the nervous disturbance is abated, the appetite returns. She has a pint of ale with her food during the day, sleeps well again, and is discharged on the morrow, to recover her perfect strength and health gradually. The case thus managed is a slight affair; neglected, it would probably have been Delirium Tremens. Those hereafter cited are Delirium Tremens, except the second, of extreme severity; and must not be considered, in any sense, *average*. The appeal to chloroform was held to be dangerous, and never accepted save as the "*ultima ratio medendi*."

On admission, patients receive a warm bath, a bed, and light food, if they desire it, from the attendants, before the evening visit of the physician, at 7, P. M. The "punch" mentioned in the reports, except where otherwise specified, consists of a pint of milk, two ounces of brandy, and q. s. of sugar. The chloroform employed was that manufactured by Powers & Weightman, Philadelphia. These items premised, we submit the cases for what they may be worth.

The first is Delirium Tremens; cure, relapse, and final recovery, without the aid of chloroform.

CASE I.—Oct. 31st, 1853, 7, P. M.

Physique.—T. S.; 35; white; Irish; butcher; height, 5 ft. 6; weight, 140 lbs.; skin, hair, and eyes dark; features coarse; frame athletic; temperament, bilious-lymphatic; general condition pretty good.

Symptoms.—Slight gastric irritation, headache, anorexia, quick pulse, dry and warm skin, constipation, slight delirium and tremor.

Treatment.—Emesis, by inf. hum. lup. hot; slight catharsis, by Haust. nigra. Laudanum, gtt. 120, to be repeated according to indications. Ale, Oj., containing tr. hum. lup. f. $\frac{3}{4}$ ii., to be given in four draughts at intervals of an hour.

Nov. 1. Took 360 gtt. tr. opii. Fell asleep at 12 $\frac{1}{2}$, and remained so until 5 A. M. Febrile disturbance controlled. Is now, 8 A. M., awake, but quiet. R Tr. opii, gtt. 120. Ale and tr. hum. lup. as before. 8 P. M. Went to sleep at 9 $\frac{1}{2}$ A. M.; continued so for three hours; is now calm and rational. R Ale, Oj.

Nov. 2. Slept all night: seems about well.

Nov. 8, 7 P. M. After one week of apparent health under the strict discipline of the Hospital, and without stimulus except as by medical order, ale, Oj., daily, he became, this morning, uneasy and wild. Delirium incoherent, busy, and apprehensive. R Tr. opii, gtt. 60. Punch, Oj., containing Sp. Vin. Gall., f. $\frac{3}{4}$ ii.

Nov. 9. Did not sleep last night. Is now in much the same mental condition. Constitutional disturbance slight. R Tr. opii, gtt. 60. Punch, Oj. (s. v. g. f. 3ii.). To have as much punch as he can drink through the day, and sulph. morphia, gr. ss. hourly. 5 P. M. No improvement: very delirious; screams and prays incessantly. Increased the stimulus, giving him whiskey (which he prefers) *ad libitum*. 9 P. M. More quiet; pupils contracted, pulse 80, strong; evidently under the effect of opium and morphine. Respirations seven per minute; slight spasms of the extremities. To be carefully watched.

Nov. 10. Slept all night; is now, 9 A. M., sleeping. To have ale, Oj., on waking.

Nov. 11. As above.

Nov. 12. Seems well again.

Nov. 14. Discharged, cured.

In the following case, chloroform was employed. After due preparation, treatment was commenced with narcotics and stimulants. Diligent use for 30 hours showed the insufficiency of these agents. A single administration of chloroform "jugulated" the disease. This case is introduced as the type of a large class.

CASE II.—Aug. 10, 1853, 7, P. M.

Physique.—I. P.; 28; white; Irish; butcher; height, 5 feet 10; weight, 145 lbs.; temperament, bilious-nervous; condition, good.

A habitual drunkard for many years. Has been drinking brandy freely, and working in ice-houses. Presents the ordinary characters of Delirium Tremens. Is perfectly wild and unmanageable.

Treatment.—After freeing the stomach and bowels, ordered tr. opii, f. 3 i. every hour, for five hours, unless he should sleep; and a small quantity of stimulus.

Aug. 11; A. M. Treatment continued. No sleep or improvement. 10 P. M. No improvement. Chloroform administered with ease, and happy effect.

Aug. 12. Slept nine hours.

Aug. 20. Is well.

The third case was more aggravated than either of the preceding. True Delirium Tremens, partially subdued during the first night of observation, progressive in intensity during the following 36 hours, under the ordinary treatment; becoming critical on the third night; resisting the repeated use of chloroform; persistent under the full effect of opium, on the fourth day and evening; and finally subdued by the anæsthetic, on the fourth night.

CASE III.—Dec. 23, 1853, 7, P. M.

Physique.—S. B.; æt. 32; white; English; height, 5 ft. 8; weight, 165 lbs.; book-keeper; dark hair and eyes, regular features, rather full habit; bilious-lymphatic temperament, with tokens of the scrofulous diathesis. A man of habitually intemperate habits, for the past three months in a constant debauch.

Symptoms.—Little or no excitement; skin and bowels inactive; prostration well marked; tremor of limbs and tongue so great that he cannot stand, lift a glass to his lips, or articulate his words. Motions not unlike those of chorea.

Treatment.—Emesis with inf. hum. lup., ℞ ol. ric. f. ʒ i. tr. opii, gtt. 100. Punch through the night.

Dec. 24, 9 A. M. Slept two hours; is quiet, but wandering. Tr. opii, gtt. 120. Punch and alc. 7 P. M. Condition and treatment the same.

Dec. 25, 9 A. M. Did not sleep at all. Is more delirious. Continued stimulus. ℞ Tr. opii, gtt. 40, every hour for five hours. 10 P. M. Very delirious; skin blanched; perspires abundantly. Chloroform by inhalation. Anæsthesia continues but fifteen minutes. Repeated four times in two hours, without permanent effect. Condition as before inhalation, or somewhat worse. Ordered him to be freely fed with strong milk punch, and to take tr. opii, gtt. 50.

Dec. 26, 9 A. M. Did not sleep at all. Continue opium, gtt. 20, hourly, and stimulus. 10 P. M. Sleepless and furious; pupils a point. Chloroform by inhalation, to the approach of stertor. Spasm and laryngismus during its exhibition. Effect transient. Repeated: effect permanent.

Dec. 27. Slept 7 hours; is calm and rational, still under the effect of opium.

Dec. 28. Delirium Tremens no longer. Under treatment for constitutional syphilis.

The fourth case is more violent than the preceding, but otherwise a parallel (except in the *internal* use of chloroform), until the night of the 25th of January. At that date, after anæsthesia had been vainly invoked, the prognosis became unfavorable. Renewed inhalation was followed by unforeseen asphyxia; but it would appear that even at that alarming moment the disease was conquered, and the final convalescence initiated and secured.

CASE IV.—Jan. 23d, 1853; 7, P. M.

Physique.—H. J., æt. 38; white; Scotch; architect; height, 5 ft. 11; weight, 170 lbs.; robust; well developed; of good constitution; health uniform, except when disturbed by excesses.

Present condition.—"Has been on a long spree;" very much excited, talkative, facetious; eye wild; limbs tremulous; tongue ditto, and pale; skin warm, rather dry; pulse 80, full; conversation coherent. "Has had no sleep for three nights."

Treatment.—Full emesis by warm infusion of hops, followed by tr. opii, gtt. 75, when the stomach became quiescent. 10 P. M. Condition the same; effect of opium not perceptible; same dose repeated. 12 P. M. Pupil free; general condition the same.

Jan. 24th, 9 A. M. Slept but little; appears much as last night; bowels not open. R comp. cath. pil. iii, and an enema of warm water at 3 P. M.; milk punch, Oj. Appetite good. 7 P. M. Bowels freely moved during the day; is now quite calm, rational, quiet, and disposed to sleep; skin normal. No further treatment.

Jan. 25th, 5 A. M. Called to patient, who is confused, wild, noisy; insists upon getting up. 7 A. M. Condition the same. Desiring to try sedation by chloroform, ordered R chloroform ℥ i, mucil. acaciæ, f. ℥ viii, sumat, f. ℥ i, sing. horis. 4 P. M. Has taken f. ℥ vi, as above, with happy effect; is much more quiet; has been gently restrained in bed, and fed *ad libitum*. 7 P. M. Delirium increasing (often observed at the approach of night); is very restless and noisy; disturbs the house, and requires forcible restraint. Applied the bed-straps, and administered chloroform by inhalation to the approach of stertor, twice, without permanent good effect. Left him at 8 P. M., with a rapid and feeble pulse; prostration and excitement great; having ordered tr. opii, gtt. 60, milk punch, Oj, containing s. v. g. f. ℥ iv, to be given as rapidly as possible. 12 P. M. Condition the same; repeated above. 3 A. M. Do. do.

Jan. 26th, 9 A. M. No improvement perceptible; pupil quite fine; pulse rapid and feeble; excitement great and constant; continued the punch, without the opium. 4 P. M. Has remained screaming, struggling, and convulsed during the day; surface bathed in cold perspiration; pulse exceedingly rapid and feeble; muscular activity still great; face wears an aspect almost cadaveric; has been forced to take two pints of punch, containing 8 oz. of brandy, during the day. There seems no prospect of this spasmodic activity ceasing, except with the total loss of power. Administered chloroform by inhalation; spasm and laryngismus very great; anæsthesia brief, and followed by no good effect. Repeated. Respiration suddenly *suspended* at the instant when it was becoming stertorous. Having no aid at hand, the pulse was not questioned. Performed artificial respiration by elevating and depressing the ribs with the hands; function rallied in a few moments, becoming gradually stronger and more easy. Left the patient at 7½, entirely quiet, and inclined to sleep. Before inhaling the chloroform, he took tr. opii, gtt. 75. 10 P. M. Quite quiet; has had an

hour's sound sleep. 12 P. M. Has slept another hour and a half. Ordered punch freely, and tr. opii, gtt. 75, if he should become wakeful.

Jan. 27th, 9 A. M. Quiet and dozing; has slept four hours; taken a pint of punch and six ounces of brandy since last note; continued treatment.

Jan. 28th. Sleeps continuously; is otherwise well.

Feb. 2d. Discharged from treatment, cured.

Case five was in itself less severe, but tells a very similar story for chloroform.

CASE V.—Dec. 13th, 1852, 7 P. M.

Physique.—H. L., æt. 60; white; Irish; height, 6 ft.; weight, 170 lbs.; dark hair and eyes; fair skin; well developed; of strong constitution; bilious-sanguine temperament; health generally good. "Has had yellow fever and phagedenic chancres, but no other sickness which confined him to bed."

Present condition.—Drunk. R̄ pulv. ipecac. ℥i, to be followed by a full draught of inf. hum. lup.; tr. opii, gtt. 70; ale, O ss.

Dec. 14th, A. M. Did not sleep last night; is up, and walks about the ward; eats well; bowels regular; appears strange, but hardly delirious. 6 P. M. As above. R̄ punch, Oj, s. v. g. f. $\frac{5}{3}$ v; tr. opii, gtt. 150. 12 P. M. In raving delirium; chloroform by inhalation; anæsthesia and sleep followed.

Dec. 15th, 10 A. M. Slept three-fourths of an hour after the chloroform, and no more during the night. Repeated stimulants and narcotics of last night. 10 P. M. In the same condition of furious delirium; chloroform by inhalation; spasm and laryngismus during its exhibition; slept $1\frac{3}{4}$ hours after. 12 P. M. Re-administered chloroform; at the point of stertor patient *ceased to breathe*; *pulse at wrist imperceptible*; cold affusion restored him, and he immediately dropped asleep.

Dec. 16th. Slept all night, and continues asleep; is well and rational.

March 2d. Died of pneumonia.

In the following case, after an hour and three quarters of futile anæsthesia, to the point of stertor, having in view the issue of the preceding cases, we determined to proceed to the *verge* of asphyxia. This occurred suddenly, and by it the disease was as suddenly vanquished. Artificial respiration completely restored life and all its organic functions. The patient slept; and, after eight hours of sleep, rose again to the level of consciousness and reason, perfectly well.

CASE VI.—Feb. 9th, 1853, 7, P. M.

Physique.—C. C., æt. 36; white; native of Maine; height, 5 ft. 7 in.; weight, 170 lbs.; laborer; eyes black; hair do, thick and coarse; well developed; athletic; bilious-sanguine temperament. A drunkard for several years, and for six months past almost constantly intoxicated; drinks brandy.

Present condition.—Bewildered, not delirious; tremor of tongue and limbs excessive; skin florid, hot; pulse 100, soft; from ankle to middle third of the thigh, on right side, red, swollen, and hot. \mathcal{R} Cold water dressing. "Has not vomited since last drink." 7½ P. M. \mathcal{R} Inf. hum. lup. O. iij; prompt emesis follows; vomiting persistent. 11½ P. M. Haust. nigra, f. \mathcal{Z} ii; tr. opii, gtt. 75.

Feb. 10th, 1 A. M. Still continues to vomit at intervals; tr. opii, gtt. 75. 2½ A. M. Tr. opii, gtt. 60. 4½ A. M. Do. 6½ A. M. Do. 7 A. M. Fell into uneasy sleep, with intervals of waking and delirium; pupil contracted, iris active. 11 A. M. Tr. opii, gtt. 60. 3 P. M. Do. 8 P. M. Has slept quietly for two hours; no stimulus has been given; patient has taken a little food; bowels freely open. 10 P. M. Quiet, with intervals of sleep.

Feb. 11th. Has slept most of the night; inflammation of the skin and cellular tissue of the leg subsiding; is quiet, but not much disposed to sleep. Tr. opii, gtt. 60. 10 P. M. Has remained in the same condition all day; is still quiet and rational; tremor of limbs passed away. \mathcal{R} Tr. opii, gtt. 60.

Feb. 12th, 9 A. M. Seems about well. 12 M. Wild and wandering. 8 P. M. More delirious than at any previous note. Tr. opii, gtt. 125. 9½ P. M. Delirium furious; entire surface bathed in cold perspiration. \mathcal{R} brandy freely; tr. opii, gtt. 75; patient has taken more than an ounce. 10 P. M. Ordered chloroform, \mathcal{Z} i; inf. lini. f. \mathcal{Z} viii; sunat, f. \mathcal{Z} i sing. horis.; brandy continued freely.

Feb. 13th, 6 A. M. More quiet; has not slept; is weaker. \mathcal{R} 30 drops of laudanum and an ounce of brandy every hour, the brandy in egg nogg. 10 A. M. More calm; continued treatment. 3 P. M. Still wandering and watchful; has taken a half pint of brandy and 250 drops of laudanum since morning. \mathcal{R} sulph. morphizæ, gr. i. 8 P. M. No better; pulse weak and rapid; surface clammy and pale. Chloroform by inhalation to stertor; no permanent sleep or anæsthesia; patient was kept under its influence for an hour and forty-five minutes without benefit, when it was determined to push its effects; after a few seconds of stertor, *respiration was instantly suspended*; pulse 0; artificial respiration for a few moments is followed by quiet and continuous sleep.

Feb. 14th. Slept uninterruptedly all night.

Feb. 15th. Sleeps almost continuously; functions all regular.

Feb. 17th. Discharged from treatment, cured.

Case seven is double. The first attack was managed with comparative ease by chloroform, and its subsidence was marked by some of the symptoms of cerebral inflammation. The second is remarkable. Opium, for a time, secured quiet, but could not, even in extreme quantity, procure sleep. The phenomena of anæsthesia were unusual. Asphyxia, in the other cases, was a sudden invasion; in this, it advanced by slow progression for several minutes after the inhalation was suspended. We watched it until it was consummated in death. Re-animation was more difficult than before, and the disease was not cured. The conflict of narcosis and Delirium Tremens, during the following night, was extremely interesting. After what was thought to be a cure, on the evening of Oct. 30th, the disease was reinstated, and as to its subsequent character we are much in doubt. It was treated as Delirium Tremens with cerebral inflammation.

CASE VII.—June 28th, 1853.

G. S., æt. 35; white; native of Long Island; height 5 feet 10; weight 160 lbs. A sinewy, athletic frame, bilious-nervous temperament; for fourteen years in the naval service; of intemperate habits, indulging periodically in a "spree" once in 3 or 4 months. Has been drinking very freely for four weeks. Is rational, but much excited. Tremor of limbs excessive. Pulse full. Face wears a dark, venous flush.

June 29th. Came in late last night; received no treatment except a small dose of laudanum. This A. M. free emesis and catharsis. Excitement great; delirium furious. Ordered tr. opii, gtt. 60; whiskey, f. ʒ iv; milk punch, Oj. 9 P. M. Is worse; perfectly uncontrollable. R. sulph morph., gr. i. 11, P. M. Chloroform by inhalation, preceded by a draught of brandy, f. ʒ ii. Complete anæsthesia secured.

June 30th. Slept half an hour under chloroform, and remained quiet and dozing all night; this morning fell into a sound sleep. 6, P. M. Slept until 5, P. M. Ord. punch freely, sulph. morphia, gr. i.

July 1st. Slept all night; is rational, and apparently well. July 3d. Complains of slight pain and dizziness in head; has no other trace of his late illness. Ord. C. Cups, ʒ iv., to temples. July 6th. Discharged cured.

Oct. 20th. Re-admitted. Has been drinking freely for a fortnight. Appears much as at previous entry. Functions, except the nervous, not much disturbed. Pulse full, 100. Ord. emesis, with hop-tea, but failed to secure it. It was not thought worth while, at that hour, to make another attempt with a different agent. R. Tr. opii, gtt. 120. Repeated at 9, P. M., and at 11, with sp. vin. gall, f ʒ iv.

Oct. 27th, 9 A. M. Slept very little; is quiet, but busy and wakeful. Determined to procure sleep by opium and stimulus, if possible. 11, P. M. Took 120 gtt. tr. opii, at 9 A. M. Repeated at 11, 6, 7, and 9, P. M.

Ale and punch freely through the day and evening; condition as in the morning. A little while since became suddenly alarmed; started up and passed rapidly along the scale of excitement and delirium until he became perfectly incontrollable. Pupils fine. Chloroform, by inhalation. Violent spasm, with opisthotonos and epileptiform convulsions during exhibition; the body remaining rigid for a moment or two; consciousness and motion returned together, and immediately. Chloroform again. Spasm less; laryngismus so great that its administration was suspended. Respiration very slow and labored; *becomes more and more difficult; finally ceases altogether.* Artificial respiration by pressure upon the thorax attempted unsuccessfully for nearly two minutes. Insufflation, followed with pressure, was maintained for some minutes, when the natural breathing was resumed, and continued at seven respirations per minute, stertorous. Slept 20 minutes. When he woke s. v. g, f. $\frac{3}{4}$ iv. was given, and chloroform again administered; little or no spasm of any sort followed. Slept a few moments. Woke and talked incoherently for a short time, then gradually settled into a profound, but uneasy slumber. Respirations 5 per m. Pulse feeble, 130. 1, A. M. As bad as ever. Raves and throws himself about the bed incessantly. Is evidently narcotised, though sleepless; for, in the moments of fitful sleep and exhaustion, which, alternate with his paroxysms, he drew but 4, 3, and, in one case, 2 inspirations in a minute. During the paroxysm respiration was very rapid; this condition continued until 3, A. M., when he became more quiet. Slept in longer intervals. Was very narrowly watched until 6, A. M., when I left him overcome with sleep. Pupils still contracted.

Oct. 28th. Sleeps, but is restless. Takes stimulants freely. 6, P. M. Has slept all day. Pupils normal. Pulse 110. Volume and force normal. Is quiet and almost rational. R. Tr. opii, gtt. 60. s. v. g., f. $\frac{3}{4}$ iv.

Oct. 29th, A. M. Slept all night. Continued treatment. P. M. Slept until noon, when he dressed himself, went to the carpenter's shop and worked the remainder of the day; apparently as well as usual. Returns this evening, complaining of pain in the head and dizziness. No physical signs in this connection perceptible. Ord. C. Cups to temples, $\frac{3}{4}$ iv.; tr. opii, gtt. 60. Repeat at 8, P. M. In the course of the night became incoherent and delirious again. It was thought to be relapse of Delirium Tremens, occasioned by his exposure and fatigue during the previous afternoon. The strictly cerebral symptoms did not engage attention particularly at the time.

Oct. 30th, 9, A. M. Complains of the pain in the head, which was not sufficiently considered, and has not slept at all during the night. Ordered him punch and laudanum. 10, A. M., becoming more violent. Increased the stimulus. 11, A. M., do. do. 12 M., as above. At this stage, pupils being slightly contracted, no marked heat of the head, or febrile

disturbance, *suspecting, only*, that cerebral inflammation might have supervened, ordered emp. vesicans, 5×4 , to nape of the neck; sinapisms to feet and legs; hyd. chlor. mit, 1 gr. hourly; all restraint to be removed, the patient being watched to prevent injury to himself or others. Tr. opii, gtt. 100. Calls for liquor, and will not be pacified without a drink. 6, P. M., bowels have moved and blister has drawn; patient still very much excited and voluble. The delirium is active and busy, but seems less intense. 10 P. M., more quiet, and seems inclined to sleep.

Oct. 31st. Slept $2\frac{1}{2}$ hours during the night. Delirium persists, but in a milder form. Has taken upwards of 16 grs. hyd. chlor. mit., in varying quantities. From this date the delirium seemed to wear off, not in such manner, however, that the effect could be assigned to any medication employed. Hygienic conditions were enforced, and opium, with brandy, continued.

Nov. 2d. Slept all night.

Nov. 5th. Discharged, well.

The successful issue of the following case is clearly due to chloroform. Life was saved at its extreme hour.

CASE VIII.—April 26th, 1853.

F. E., æt. 49; white; stage-driver; native of Mass.; height, 5 ft. 5; weight, 150. Nervous-sanguine temperament. Habitually temperate. Has led a life of hardship and exposure, but has usually been well. This is his "first attack of horrors." "Has been drunk for a week." *Present condition*.—Has acute bronchitis of no great severity. Bears the marks of constitutional depression, with great nervous excitement. Bowels constipated; stomach irritable, vomiting everything taken. Pulse very feeble; tongue moist, red, and tremulous. Is very delirious, but good natured—the passion of fear predominating.

Treatment.—The notes do not mention in what way the bowels were moved—probably by enema. The patient was fed with ice and brandy in small quantities, and tr. opii, gtt. 120, at 9, P. M.

April 27th, 9 A. M. Slept none at all. The brandy and ice have nearly controlled the vomiting, which now occurs at infrequent intervals. Pulse 70, feeble. Tongue heavily furred and dry. Pupils natural. Continued treatment, ordered punch, Oj., and tr. opii, gtt. 60, to be repeated at 12 M. 4, P. M., still raves, and struggles with his attendant. Continued punch, freely. R Tr. opii, gtt. 60. Repeat hourly, until 9 o'clock. 10, P. M., has taken tr. opii, gtt. 360. Find him standing in his bed, trembling with apprehension at the slightest noise. Pupils very fine. Ord. punch, *ad libitum*, to be soothed, not restrained.

April 28th, A. M. Has not slept. Remained quiet through the night.

Calls for whiskey. Is tractable, though wild. Ord. whiskey, f. $\frac{3}{4}$ ii., tr. opii, gtt. 60, hourly, until noon, and punch freely. 9, P. M., is worse. Delirium is now violent. Pulse feeble, uncertain, about 70. Respiration 28; irregular. Ordered s. v. g, f. $\frac{3}{4}$ iv., tr. opii, gtt. 120, to be repeated at 10. 11, P. M., no amendment. Chloroform by inhalation. Anæsthesia transient. Repeated at frequent intervals for two hours. Left him quiet and inclined to sleep.

April 29th, 8, A. M. Slept two hours. Is now quiet, but very weak; raves incessantly, and says he shall surely die if he cannot have whiskey. Ord. whiskey, f. $\frac{3}{4}$ iv. Pulse 90, feeble. 10, A. M., has been diligently plied with whiskey and punch. No amendment visible. Chloroform again. Produces spasm, but no sleep. Continued the inhalation one hour. 5 P. M. Appearance unfavorable. Face haggard; eyes protruding; chin tremulous; tongue flabby, pale, and moist. Pulse extremely feeble. Gave him ale in full draught, with tr. lupulin, f. $\frac{3}{4}$ iii., and tr. opii, gtt. 120. Ord. emp. vesic. 3×3 , to nape. 7, P. M., no change for the better. Ord. punch, Oj., and whiskey, f. $\frac{3}{4}$ iv. 8, P. M., tr. opii, gtt. 120. In restless and desperate delirium. 9, P. M., do. Tried to quiet him by soothing talk, with partial success.

April 30th, 8 A. M. Slept a few moments at a time, in all about one hour, last night. Pulse very feeble; tongue dry. Delirium persists. Ord. stimulants, *ad. lib.* 12 M. An hour since, watching his opportunity, escaped from the ward; was brought back with difficulty. 9, P. M., continued treatment. Patient no better; to be carefully watched, and to take tr. op., gtt. 120, through the night.

May 1st, 9 A. M. Evidently sinking. Pulse very feeble; tongue less dry. Delirium constant; is very difficult to manage. Continued stimulus. 12 M., ord. tr. opii, gtt. 120. Pupil normal. To have egg-nog instead of punch: as much as he can be made to take. Pulse can scarcely be felt at wrist. 4, P. M., no improvement. 6, P. M., face livid, pulse at wrist 0. Heart's action extremely feeble—70. Can, with difficulty, move in bed. Says he must die. Calls for liquor, and takes sp. vin. gall, f. $\frac{3}{4}$ iv. at once. 8 P. M., pupil contracted. Has taken no opium since noon. Chloroform by inhalation. The heart extremely feeble; *its action becomes less—less—wavers. Chloroform continued. Respiration 4—8 per minute. Limbs spasmodically convulsed at intervals. Heart's action stronger; pulse returns—fuller—respiration more steady. Patient sleeps—semicomatose.* In five minutes wakes again. Chloroform again administered, for 10 minutes, at the end of which comes quiet and profound sleep. Limbs perfectly relaxed. 12, midnight, still asleep.

May 2d. Is better. Has slept all the time since last note; now is wakened only to take food and brandy.

May 4th. Has slept constantly—as above.

May 9th. Is well.

In case nine, we have again chloroform, attended with both asphyxia and syncope. From both the patient was restored. So far as we can trace the influence of the anæsthetic, it seems to have been favorable. The death which followed, was clearly by exhaustion.

CASE IX.—Sept. 24th, 1853, 7, P. M.

Physique.—A. H., white, Irish, æt. 36, height 5 ft. 2, weight 110. Has a dark skin, hair, and eyes, bilious temperament, good constitution. Health has been uniform, except when disturbed by periodical excess in drinking during the last eight years. Comes in after eight days of continued debauch; during which she says she has eaten scarcely anything and has had no sleep for 72 hours. *Condition.*—Tremulous and excited, delirious, but can understand and answer questions. Remains muttering to herself incoherently. Tongue coated. Pulse and skin about normal. Ordered.—Punch, Oj. and brandy, f. $\frac{3}{4}$ iv., tr. opii, gtt. 60, to be followed by 30 more in two hours.

Sept. 25th. Slept none last night. Condition as above. Nervous disturbance is the only prominent feature of her case. R̄ Tr. opii, gtt. 60, to be followed by 30 hourly. Punch and brandy as last night. 8 P. M., called to patient by the report “that she has had a fit.” She permits no one to approach her, is pale, feeble, and very wild. From the account of attendants, has evidently suffered epileptiform convulsions. She is resolved to make her escape from the ward. Ordered restraint—tr. opii, gtt. 60, brandy ad libitum. 10 P. M. No improvement. Gave her tr. opii, gtt. 50, two ounces of brandy, and proceeded to administer chloroform to deep anæsthesia, resuming the administration whenever she seemed about to pass from under its effects. This was continued for half an hour. During the progress of anæsthesia subsultus came on, deepening in intensity, until it amounted to general spasm of the muscles. This ceased when the effect of chloroform was completely secured, and in the reverse order attended the progress of re-animation. Did not think it best to repeat the inhalation. Ordered attention and urgent support, with punch, &c.

Sept. 26. No sleep last night, was more quiet, and seemed occasionally to doze. Pulse 120—feeble. Ordered chloroform internally by the following formula. R̄ Tr. opii, f. $\frac{3}{4}$ ss., tr. camphor f. 3 i, chloroform, 3 ii, tr. hum. lup. f. $\frac{3}{4}$ iii, to take a table spoonful every 2nd hour. Stimulants continued. 10 P. M. Patient remaining in the same condition, it was determined to try inhalation again. After giving a drachm of laudanum, it was commenced. At first it produced spasm similar to, but more violent than

on the previous night. It was suspended at complete anæsthesia, and the patient seemed to pass into sound sleep. Woke in ten minutes. Inhalation resumed, with the same symptoms. After a few inspirations *the subsultus and respiration ceased simultaneously and instantly*. The head was thrown back over the pillow, the eyes open and fixed, the face pale and cadaveric. *No pulse, no sound at the heart*. Cold affusion failed to resuscitate, mechanical motion of thorax and trachea also. Insufflation by the mouth was promptly resorted to, and maintained for ten minutes, when the natural function and consciousness were completely restored. She was watched, in the hope that at the gate of death the vicious circle of her dreams might have been broken, but we were soon convinced that the delirium was as high as ever. Ordered brandy ad libitum, and tr. opii, f. 3 ss.

Sept. 27th. Patient is bright this morning, says she is well, her appetite is good. Has not slept, though quiet. A pleasanter delirium than yesterday; seems occupied with her household affairs. Ord. tr. opii, gtt. 50, once in two hours, and as much punch as she can be made to drink. In the course of the morning she rose and walked in the ward. 9 P. M. Fiercely delirious again, requires restraint with straps. Continued treatment.

Sept. 28th, 5 A. M. Conscious and rational—dying. 5h. 10m., died. *Autopsy* shows nothing of importance, a normal brain, neither anæmic nor congested, a little serum under the arachnoid and in the ventricles, hardly more than usual in death from any cause.

Case ten is one of sedation by the internal use of chloroform.

CASE X.—Jan. 13th, 1853, 7, P. M.

Physique. J. M., 39, white, Ireland. Height 6 ft. 3, weight 166 lbs., shoemaker. A man of immense proportions and strength; an animal, passionate nature, bilious sanguine temperament, and uniform health (except when disturbed by drunkenness), in all climates and circumstances. A soldier in the British and American armies, and a bully of the town. Has been twice treated for delirium tremens in this Hospital. Present condition good. Functions, except the nervous, all regular. Says he has "been drinking day and night for three weeks, all the time." Is sane, but much alarmed and shaking badly. Ord. emesis, with inf. hops; ale, Oj.; tr. opii, gtt. 150.

Jan. 14th. Slept most of the night. Skin warm and dry, pulse a little accelerated, face flushed. Ord. pulv. ip. co. 3 i; 10 grs. every two hours. Ale, Oj. 7 P. M. Skin soft, moist, pulse has lost its excitement; is somewhat delirious; pupil free. R Tr. opii, gtt. 100; punch, Oj.; ale, Oj. 10 P. M. Is furious, attempting all manner of violence. Confined him in bed and continued treatment, tr. opii, gtt. 20, hourly.

Jan. 15th. Has not slept during the night. Is still furious. Pupil

small; administered chloroform by inhalation, three times, without permanent advantage; anaesthesia very transient. \mathcal{R} chloroform 3 i, in mucil. acaciæ, f. $\frac{2}{3}$ viii, $\frac{2}{3}$ i, hourly. Under this medication patient became calm, and remained half asleep during the day. Toward night delirium returned. Ord. continued support and stimulus and tr. opii, gtt. 30, every second hour.

Jan. 16th. No sleep as yet. Resumed chloroform internally, as yesterday. After the third dose, the patient fell into a doze. Ordered tr. opii, f. 3 i.

Jan. 17th. Slept most of the night. Is conscious, rational, and doing well.

Jan. 20th. Quite well.

The foregoing pages contain all which we have seen of asphyxia and syncope, after chloroform. Will they not justify the assertion that death from these causes should seldom occur? Other cases might be presented illustrating varieties and complications in the disease; others still, detailing idiosyncrasies in the patient; but with these our present purpose ends.

In producing artificial respiration we have not found it necessary to lift the epiglottis and draw forward the tongue, according to the proceeding of M. Ricord. Neither have the galvanic battery and the use of diffusible stimulants been imperatively required.

Finally, if any should expect the suggestion of a scheme for managing the various forms of disease comprehensively classed "*Mania a potu*," we would answer, the subject is large and difficult. Science does not yet fully illuminate it. In the field of Nervous Pathology, speculation has projected theories, observation has gathered facts. Each has done good service. The science of the physician equips and instructs the doctor, the art of the doctor endorses and seals the physician. The mind which commissions all its faculties and reviews all their work, will not rest in any system of rules, which must be in great measure empirical.

The management of these cases should be *par excellence* independent.

"See with your own eyes, and judge with your own judgment," is the maxim of a much-respected teacher. With present light upon this point, we shall resort to chloroform only when other medication fails, and *then* we shall not hesitate to seek any measure of its full effect which the occasion may indicate.

The Religious Duties of Physicians to their Patients.

To the physician who is also a professing Christian, no apology, surely, is necessary for inculcating the duties just mentioned ; though all must be aware how seldom even an isolated remark appears in a medical journal, which recognizes any religious duty as devolving upon physicians in their strictly professional relations. The cause of this silence we cannot now inquire into. It is enough for the present to say, that it is not because infidelity is more common in the medical than in other professions ; for this is not the fact, as we will hope to show in a subsequent article.

The particular duty we now propose to inculcate, is that of endeavoring to promote the religious welfare of patients, especially in all cases in which there is reason to anticipate a fatal termination.

Many of our readers will perhaps remember the three letters upon this subject, addressed, some eighteen years ago, by Dr. T. H. Burder, of London, to a junior practitioner. To these our attention has been called anew by their publication in a pamphlet of 40 pages, by the American Tract Society ; and we shall here reproduce some of Dr. Burder's ideas, while we give expression to such as we have long entertained in connection with this important subject.

It is intended, in all cases when possible, that the pages of this journal shall be addressed to the entire medical profession. Would that each member of it could regard the following remarks as addressed to himself personally as a Christian physician ! Would that each were such an one, in this respect, as the writer of the letters alluded to ! But let no one sneer, who does not consider any such duties as binding upon himself. This is a subject demanding at least the respect and the consideration of all.

The letters of Dr. Burder point out the difficulties of the undertaking to promote the religious welfare of patients, the encouragements to be expected, and the most eligible methods to be adopted.

It cannot be denied that Christian physicians, when incessantly pressed by a laborious practice, find it very difficult to perform those daily personal duties, with interest and regularity, which no Christian should ever omit. The Sabbath may be to them a day of augmented toil, instead of repose ; and any season set apart for such duties, may at any time be engrossed by the claims of others in suffering. But all this is only to be known, in order to be guarded against ; and strong as is the temptation to remissness, there is no valid excuse for more than an occasional neglect of such duties. We could mention physicians of the highest eminence, from Boerhaave to the

present time, whose example verifies the remark just made. But if in any instance neglect of personal and domestic duties is unavoidable, so much the more incumbent is the duty of promoting, so far as may be, the religious welfare of patients, while occupying the time with them.

And yet it is lamentable to perceive the effects, in a religious point of view, too often produced by *success*, as it is called, in practice. Not a few instances could we mention, in which a young practitioner, of the most elevated and exemplary Christian character, in twenty years became irreligious, negligent, and perhaps even skeptical, because he has meantime become a *successful* man in his profession! What a success is this! a success for which he has bartered his own soul, there is too much reason to apprehend, and those of many others he might else have been instrumental in saving! Young men of Christian education and Christian hopes, who are engaged in the practice of our noble art, does not this subject demand a seasonable and a solemn consideration?

It is easy to say that it is enough for the physician to prescribe for the patient; and that he cannot perform this duty so well if he has also another object in view. We reply, that it is his first duty to bring all his powers to bear upon the treatment to be recommended; *having done this*, he is then as free, for the moment, as any other man, to make such remarks as he may deem proper upon any subject. And a single suggestion is often more fruitful in good results than a protracted discourse, which we shall not, of course, be understood to recommend. It is easy also to remark, that all this is extra-professional and trenches upon the prerogatives of the clergyman; but from the very fact that the remarks made by the physician are *not* professional, they will be received candidly, as having been prompted by a feeling of kindness and real interest in the patient's welfare, and therefore will be more likely to produce the desired effect. The physician can also best judge precisely when to speak and what to say; for he best understands the patient's circumstances, temperament, and mental condition at the time. And besides, a few remarks from the physician secures the best possible preparation of the patient's mind for religious conversation with a clergyman.

We shall not be understood, therefore, to inculcate the duty under consideration as a substitute for the professional services of clergymen, but as the best preparation for, and the best aid to, their successful performance. Here is the point where the two highest human occupations meet; and where the minister of the Gospel and the Christian practitioner should never be found at variance. Both would save the soul of their dying fellow-being. The physician is to obtrude no sectarian efforts at such a time: how, then, can they disagree?

It is, however, the physician's prerogative to decide when it is proper for

even the clergyman to perform his peculiar duties for the welfare of the patient. We have seen a soothing influence produced by a brief and appropriate prayer, which anodynes had been given in vain to procure. But we have also seen high excitement and even wild delirium produced by similar services rendered at an improper time, or in an injudicious manner.

Nor is there any occasion for disagreement between the physician and the clergyman on this point. Both desiring the highest good of the patient, the latter must surely admit that the former can judge better than he can, both as to the proper time, and the amount of strength the patient possesses. We have, however, been too often grieved to perceive the manifestation, on the part of the clergyman, of the feeling that his motive alone—the spiritual welfare of a sick fellow-creature—is a sufficient reason for the exercise of his peculiar office at such times and in such a manner as may to him seem best. If the physician is not a Christian, the minister will, perhaps, often find himself put off till it is forever too late; but in the other case, he certainly has no cause to complain if any importunity on his part is checked by the medical attendant, and the proper time specified. We have never hesitated ourselves to take this responsibility; nor shall we, in any case, surrender it. Nor has it often been our lot to excite displeasure in this way. Our experience accords with Dr. Burder's belief, that "the enlightened ambassadors of the Saviour, so far from entertaining a feeling of jealousy, do really hail with cordial satisfaction such auxiliaries in their trying visits to the bed of sickness and death."

2. The *encouragements* to the performance of this duty are such as arise "from the peculiar facilities which the profession affords; from the Divine benediction which may be humbly yet confidently anticipated; and from the success which has already crowned similar efforts."

The suggestions of a conscientious physician are, in the chamber of sickness, received with almost unlimited confidence. He, therefore, can say, without danger of having his motives misinterpreted, what another cannot. Whatever he may say is also regarded as a sincere expression of interest in the sick person under his care. He has, therefore, in many instances, an almost unlimited influence. He also knows how to address the patient in the way most calculated to impress and least to injure; and thus will not, by producing excitement, diminish the prospect of the recovery, as another probably would. He also has constant opportunities of associating some serious remark with his professional counsel. Shall such opportunities be lost? Let us be on our guard lest "timidity, apathy, or worldly policy deprive us of the exalted privilege of being instrumental in saving a soul from death, and thus adding another jewel to the Redeemer's crown." That such efforts have often been successful, is well known. The "Village Sermons," left by her physician for a young lady soon to die of phthisis, to

read—though his interest in her religious welfare displeased her friends, and thus prevented his visiting her afterwards—were yet instrumental in her conversion before her death.

3. The *methods* best to be adopted will vary exceedingly with the circumstances. But it can never be improper to inquire, as if incidentally, if the patient would not like to converse with some pious friend; or if his mind, now that he is confined by sickness, does not naturally turn to the uncertainty of life, and the necessity of preparing for its close. It is never improper to allude to persons who have found a sick bed their greatest earthly blessing, since they there first found that peace which this world can neither give nor take away. But if such indirect methods do not accomplish the object, we are still bound to be *faithful*, and, therefore, to use more direct language. We often have no time for delay, and shall regret any temporising in such momentous circumstances.

We have spoken of this duty as incumbent on the Christian physician in every case, at least of dangerous disease. But it should also be remembered that the period of *convalescence* is also favorable for the reception of religious impressions. Then is the patient in a condition to appreciate the goodness which has been manifested in raising him from a bed of languishing, and even threatened death; and more grateful and more impressible in respect to these important subjects.

Let us, then, realize more than we are accustomed to do, how fearful a responsibility rests upon us, as Christians, in our professional intercourse with our fellow men; and while it is our first great effort to save, or, at least, to prolong life, let us remember that to others as well as to ourselves,

“It is not all of life to live,
Nor all of death to die.”

E. R. P.

Exsection of the entire Ulna; the functions of the Arm and Hand preserved.

By J. M. CARNOCHAN, M. D., Professor of Surgery in the New York Medical College, Chief Surgeon to the State Emigrants' Hospital, &c.

MODERN surgery is chiefly indebted for the revival of the operation for the exsection, partial or complete, of the long bones, to Moreau, Percy, Champion, Pelletan, and Dupuytren. Large bones of this class have been exsected in their contiguities: thus, Butts, of Virginia, exsected the entire radius; the fibula has been removed from one extremity to the other; and even the entire lower jaw has been at once removed, at both temporo-maxillary articulations, with satisfactory results. No instance, however, has been, as yet, recorded of exsection of the entire ulna. The following case

shows that the entire ulna can be removed, and the functions of the upper extremity be retained, nearly in their original perfection.

Case.—P. Cavanagh, a native of Ireland, aged 30, of sanguineous temperament, strumous aspect, without syphilitic taint, a shoemaker by trade, while splitting wood with a heavy axe, sprained his arm so severely that, as he expresses it, the sinews seemed to give way. During the night following the accident, he was awakened by intense pain about the region of the wrist joint. This was speedily succeeded by swelling of the upper and forearm, as high up as the humero-scapular articulation. In this condition, he consulted a physician, who prescribed an anodyne liniment, to be applied to the arm. The application was used for five weeks without abatement of the pain. Fomentations of hop leaves were then resorted to. These failing to bring relief, and the malady still progressing, the patient sought the advice of Dr. Webster, of Geneva, who made along the arm two deep incisions, which were followed by a slight discharge of pus and much blood. Cataplasms were then used for about eight weeks, with no relief to the pain or diminution of the tumefaction. In the month of July, 1852, Cavanagh entered as a patient the surgical division of the State Emigrants' Hospital.

At the time of his entrance he was much enfeebled and emaciated; the presence of irritative fever showed that the constitution was sympathizing with the local disease; the hand, forearm, arm, and shoulder presented one dense, hard, tumefied, and shapeless mass, of a purple hue, and extremely sensitive when handled: the pain was unremitting, being more severe by night than by day; the circumference of the diseased forearm was three times greater than that of the corresponding portion of the healthy arm; and the density of the tissues was such, that, in connection with the wan and emaciated aspect of the patient and the purple hue of the integuments, there was reason to conjecture that the disease was one of malignant character. A lotion of acetate of lead and tincture of opium was ordered to be kept on the arm, which was also to be enveloped in oil-silk. Quinia, porter, and good diet were likewise ordered.

August 1st, 1852. Three weeks having elapsed, and the tension and swelling still remaining unabated, free and deep incisions were made through the tissues of the forearm; but the relief obtained by this operation was but momentary. The arm was now kept enveloped in a flax-seed cataplasm, with which was incorporated some extract of stramonium. During the months of September and October, the constitutional treatment was but little varied. Iod. ferri, and iod. potassii were at times substituted for the quinia; an anodyne draught of morphia was regularly given at bed-time. The topical applications consisted alternately of cataplasms, anodyne liniments, anodyne fomentations, of *eau sedative*, of extract

of stramonium. While this treatment gave no relief to the pain, several abscesses had formed along the ulnar region of the forearm, and these openings left sinuses leading to the surface of the ulna; which, by means of the probe, could be felt, denuded of its periosteum.

The diagnosis now became more precise, and his card was ordered to be marked "Ostitis, caries and necrosis of the ulna, possibly, also, of the radius." The general tumefaction, at this period of the disease, rendered it impossible to ascertain that one bone alone was affected. The patient deriving no benefit from the use of the various medicamental means which had been resorted to, was recommended to remove from the Hospital to the country, for a change of air, and, at the same time, was directed to use tonic remedies and a generous diet. The patient consequently took his discharge from the Hospital, Dec. 1st, 1852.

On the 18th May, 1853, he was again admitted, having, in the interval, followed the instructions he had received. The shoulder and upper arm were now found to have resumed their normal appearance and size; but the elbow joint was very much enlarged, and almost incapable of motion. The forearm was still dense and hard, and was, moreover, much increased in size, presenting along its ulnar aspect a purplish hue, with various openings and sinuses, from which, at times, small portions of dead bone had been eliminated during the patient's absence from the Hospital. The wrist joint was also limited in its movements, and supination and pronation could not be performed. The general health was somewhat improved, but the constitution still showed signs of participation in the local malady, and a dull and aching pain continued to extend along the arm towards the axilla.

The indications of treatment, now, were to keep up and improve the general tone of the system, and to use topically anodyne applications, in conjunction with ioduretted preparations. To this end, during the following seven months, the constitution was supported by the internal exhibition of quinia, carb. ferri. precip., iodide of potassium, syr. iodide of iron, sarsaparilla, infusion of prunus Virginiana, wine, porter, generous diet, &c.; while locally, anodyne and ioduretted cataplasms, fomentations, unguents, and the warm bath, were sedulously employed. But, from this treatment, no perceptible amelioration was obtained; the arm was still much tumefied and hard; the sinuses remained unclosed, discharging daily considerable quantities of purulent material, in which, at times, were found minute portions of diseased bone. At this time, also, Jan. 1st, 1854, the ulna could be more distinctly traced, and felt to be enormously enlarged, apparently through its whole extent; but there was good reason to infer, as no sinus could be traced to the surface of the *radius*, that this latter bone was entirely sound.

Medicamental and dietetic treatment had now been used for nearly two years; the arm was still useless, and a painful incumbrance; and the ulti-

mate cure of the malady appeared to be beyond the resources of the medicinal art. The patient was becoming impatient, and anxious to obtain relief. The resources of operative surgery seemed now to offer the only prospect of attaining a serviceable result; and, as a point of practice, the alternative presented itself of amputation of the arm above the elbow, or of exsection of the entire diseased bone. From some recent investigations which I had been prosecuting upon the lower animals, I had convinced myself that the entire ulna, although forming the chief part of the elbow joint, could be removed without materially impairing either the strength of the limb or freedom of its movements. Accordingly, I gave the preference to exsection of the bone, rather than to the severe mutilation of amputation of the arm, and performed the operation on the 14th January last.

Operation.—The patient was brought into the amphitheatre, and placed supine upon the operating-table. The assistants were arranged so as to maintain firmly the trunk and lower extremities, and be in readiness to hand the instruments and to sponge the wound. Chloroform was cautiously administered. While under the full influence of the anæsthetic, the position of the patient was changed so that he lay partly on the left side.

One assistant held and supported the upper arm of the diseased limb, compressing at the same time the humeral artery; another, seizing the hand and wrist, rotated inwards the limb from the shoulder-joint, and carried the pronation of the forearm so far as to cause the palm of the hand to look directly outwards. The elbow-joint was now slightly flexed, and the hand elevated. This twisted position of the ulna upon the radius placed the ulna upon the posterior and outer aspect of the forearm, and rendered it more easily accessible.

The limb thus placed, the assistants maintaining the arm and forearm steadily, standing upon the right side of the patient and placing the fingers of the left hand upon the integuments of the forearm towards the elbow, with a strong, straight, sharp-pointed bistoury, I made an incision along the posterior and inner aspect of the ulna, commencing at the lower part of its superior third and extending downwards to a point over the extremity of the styloid process. This divided the tegumentary layers and fascia, which were found dense, matted, and infiltrated. The tendon of the *extensor carpi ulnaris* was pulled back, and the bone exposed. This was found rough, enormously enlarged, and presenting numerous oval foramina and several cloacæ, which communicated externally through the integuments. It was now apparent that the bone must be disarticulated. To effect this at the carpo-ulnar articulation, a transverse incision, about an inch long, parting from the lower extremity of the first incision, was made across the back of the wrist. The superficial tissues were here reflected,

and the tendon of the *extensor carpi ulnaris* was carefully detached from its groove on the lower part of the ulna. The dissection was now carried along the anterior surface of the lower portion of the ulna, and the soft parts were detached from the bone as far as the interosseous ligament, the ulnar artery and nerve being carefully avoided. The soft parts were now detached from the posterior surface of the ulna, avoiding injury to the extensor tendons. An attempt was then made to pass a chain-saw around the ulna through the interosseous space opposite the lower part of the middle third. This was found impossible, on account of the approximation of the enlarged ulna to the radius, and the almost complete obliteration of the interosseous space. To divide the bone at this point, a small convex-edged saw was used. The bone thus divided, the interosseous ligament was detached downwards, and the lower fragment of the ulna was disarticulated from its inferior attachments to the radius, fibro-cartilage and the carpus.

It now remained to isolate and detach the upper fragment. The first incision was now prolonged upwards along the posterior surface of the ulna, so as to end at the upper part of the olecranon, opposite its outer edge. To this a terminal incision was joined, which extended transversely across the back of the elbow-joint as far as the inner margin of the ulna. The soft tissues were now dissected from the bone upon its posterior and anterior aspects, as far as the interosseous ligament and as high up as the insertion of the *brachialis internus* muscle. The bone was next seized and pulled from the radius, and a knife, curved flatwise, was passed close upon its interosseal margin, and grazing the bone, the interosseal membrane was divided upwards, the soft parts being held apart, and the interosseal and ulnar arteries protected.

The elbow-joint was now flexed, and opened behind by entering the bistoury close to the inner edge of the olecranon, and the attachment of the triceps extensor was next divided by cutting directly outwards. The ulnar nerve was now found, and hooked aside until farther dissection of the soft tissues was effected from the inner aspect of the joint and the upper part of the bone. The lateral ligament was next divided. The bone still remained firmly attached, chiefly by the coronary ligament and the insertion of the *brachialis anticus*. The ulna was carried backwards so as to make this muscle tense, and by carefully grazing the coronoid process with the knife the tendon was detached. Some difficulty was here presented in avoiding the humeral artery, which lay in close proximity to the enlarged coronoid process. The bistoury was now passed between the ulna and radius, and the coronary ligament divided. A few remaining fibres were divided, and the bone was completely detached.

During the operation there was a considerable flow of venous hemorrhage, which soon ceased upon removal of compression from the upper

arm. The arterial bleeding was arrested by torsion of a few arteries around the elbow-joint. The operation was performed in the presence of many pupils and professional gentlemen; and I was ably assisted during its different steps by Dr. Glück and Dr. Melville, of this city, and by Drs. Hensley, Gould, Harris, and Thomas, the Resident Assistant Surgical Staff of the Hospital.

Progress of Union.—After the operation, the patient recovered slowly from the influence of the chloroform, the pulse remaining below 50 for some hours; anodyne ordered at bed-time. Next day, Jan. 15th, the pulse 100—full and regular; oozing of blood has occurred to some extent; during the night, patient has been restless, and has suffered much pain in the arm. Sol. sulph. morph. at bed-time.

Jan. 16th. Pulse 100—not so full or strong; no more oozing of blood has occurred, and the patient feels more comfortable, having slept, and suffered but little during the night. The first dressing removed in the afternoon: for four inches above the wrist joint, the wound seems to be uniting by first intention.

Jan. 17th. Pulse 83—regular; general condition good. Ol. ricini ordered. The wound dressed; suppuration profuse. The lips of the wound have an unhealthy aspect; four of the sutures come away. Anodyne in the evening. The patient is ordered to commence in the morning with solution of sulphate of quinia.

Jan. 18th. Patient has slept badly, having suffered much pain, during the night, along the arm; pulse 80. Dressed the wound, which has assumed a better appearance; suppuration less, but little adhesion. Beef-tea ordered.

Jan 19. Pulse 90; patient has slept tolerably well. Wound dressed; discharge of pus decreasing, and union progressing from the wrist upwards; free discharge of synovial fluid from the elbow joint, upon removal of the dressing.

Jan. 20th. Pulse 84. Wound dressed; favorable progress. Full diet allowed. Quinine continued. No undue inflammatory action at either articulation. Arm still kept in the same position.

21st. Patient has suffered much pain at the elbow joint during the night. In the afternoon, wound dressed; doing well; there is free motion at both elbow and wrist joints; discharge of synovia still coming from the elbow joint.

Jan. 22d. Everything going on well. Wound dressed; but little discharge, except at the several tegumentary orifices which existed between the wrist and elbow before the removal of the bone; but little synovial fluid coming from the joint.

Jan. 25th. General condition of the patient excellent; pulse 80, and

natural. Appetite good. Only slight oozing of synovia from the elbow; no pain. Splint upon which the arm rested in a state of pronation, dispensed with; forearm now bent at a right angle, and held in a position between supination and pronation, while a light, well-padded splint, extending from the elbow to the extremity of the fingers, is placed and bandaged along the front thereof, to support the radius; limb, thus adjusted, supported by a sling passed around the neck. Patient allowed to sit up.

Jan. 29th. First splint removed, and the arm, which had been maintained fixed for the last four days, adjusted, and bandaged to another splint, jointed and formed of two pieces, one for the upper arm, and another for the forearm; the joint being opposite the elbow, in front: by this arrangement the forearm still kept in semi-pronation, and radius supported, while, by regulating the angle of the splint, by a mechanism for that purpose, the forearm can be gently and gradually extended.

Feb. 5th. During the use of both splints, dressings carefully attended to, by removal and re-adjustment at suitable intervals. To-day, upon removal of the splints and dressing, healing process of the wound found to be entirely completed; the tissues about the wrists and elbow joints being entirely consolidated, and free motion at both articulations possible by the patient himself, without any assistance.

Feb. 10th. Limb still supported by a light bandage, and by the last splint, for the purpose of allowing the tissues along the line of the inner aspect of the forearm to become further consolidated. Health of the patient is now good; he walks about like a well person. He is still upon tonic treatment, and is allowed generous diet.

Feb. 15th. Removed the splint; patient allowed to use his arm. General health entirely restored.

Feb. 18th. Five weeks after the operation, discharged from the Hospital cured.

Appearance of the Arm; and its Functions.—With the exception of a depression, and the cicatrix along the ulnar aspect of the forearm, there is no deformity of the limb.

The functions of the arm are preserved in a remarkable degree of perfection. The power of prehension is unimpaired; and flexion and extension at both the elbow joint and at the wrist joint can be performed with facility—supination and pronation can also be effected—abduction and adduction at the wrist joint can be performed; as also flexion and extension of the fingers, as before the operation; sensation and nutrition are as perfect as on the arm and hand of the opposite side.

None of the large nerves or arteries were injured during the exsection of the bone, and the muscular tissue was carefully preserved from the action

of the bistoury, with the exception of the cubital origin and insertion of those muscles which are attached to the upper portion of the ulna. These had to be divided during the detachment of this portion of the ulna.

Flexion at the elbow joint is chiefly effected by the *biceps flexor*, which is inserted into the tubercle of the radius; but the humeral origin of the other flexor muscles—such as the *flexor sublimis digitorum communis*, the *flexor carpi ulnaris*, the *palmaris longus*, the *flexor carpi radialis*, and the *pronator radii teres*—remaining uninjured, they also serve as auxiliaries in this function.

The *triceps extensor* and *anconæus* were, necessarily, entirely detached during the operation; but extension of the forearm is sufficiently performed by the action of the *extensores carpi radialis longus et brevis*; by the *extensor communis digitorum*, the *extensor minimi digiti*, and by the *extensor carpi ulnaris*; all of which muscles pass from the external condyle of the humerus, to be inserted on the posterior surface of different metacarpal and phalangeal bones of the hand.

Flexion of the wrist joint is effected by *flexor carpi radialis*, *palmaris longus*, *flexor carpi ulnaris*; extension, by the *extensores carpi radialis* and the *extensor carpi ulnaris*. Adduction, also, is effected by the *extensor carpi ulnaris*; while abduction results from the action of the *extensores carpi radialis*.

Flexion of the fingers is chiefly effected by the *flexor sublimis digitorum communis*, and the extending function of the phalanges results mainly from the action of the *extensor communis digitorum*.

Pathological condition of the bone.—The diseased ulna is delineated in the plate, Fig. 1, and presents all the characteristic manifestations of prolonged inflammatory action of a high grade. The bone is enormously expanded from one extremity to the other—at the base of the coronoid process it measures in circumference $5\frac{1}{2}$ inches; and its weight is 8 oz., minus 20 grs., the weight of a recent healthy adult ulna varying from $2\frac{1}{2}$ to 3 oz.

Bony vegetations have assumed the acicular form on the radial aspect of the bone, on a line with the attachment of the interosseous ligament, as far down as the junction of the middle with the lower third—the acicular formations also prevail on and below the coronoid process. At all other points around the upper extremity of the bone, irregular mammillated appearances exist, with innumerable enlarged, round, and oval foramina. These enlarged foramina, in conjunction with the hypertrophied condition of the bone, are characteristic signs of protracted inflammatory action, as was long ago demonstrated by the Goodsirs, of Edinburgh.

Along the inner and posterior aspect of the bone exist some eight *cloacæ*, five of which are in the upper third of the bone: two in the middle third;

and one near the styloid process. One of these *cloacæ*, situated between the coronoid and olecranon processes, communicates with the interior of the elbow joint; while another, situated at the lower part of the bone, communicates with the ulno-carpal articulation.

The other *cloacæ* pass deeply into the interior of the bone, ramifying extensively, like sinuses, in different directions along the inner texture; some of the sinuses containing portions of bone in a state of necrosis, and more or less detached. From these *cloacæ*, which opened externally upon the integumentary surface, large quantities of purulent fluid, mixed at times with portions of dead bone were discharged.

At the middle third, the circumference of the bone, by measurement, is four inches, being $\frac{5}{8}$ in. larger than the shaft of an adult femur. At this part, also, the round and oval foramina are abundant.

The lower third of the bone is also extensively hypertrophied, being, at its upper part, $3\frac{3}{8}$ inches, while, at the base of the styloid process, the circumference is $2\frac{5}{8}$ inches.

The section of the bone, as represented in the plate, Fig. 2, shows the appearance of the central portions. Here the influence of high inflammatory action, and its consequences, carious ulceration, necrosis, and eburnation, are plainly manifested. The greater part of the interior of the bone is exceedingly dense and compact. The surface of the osseous section is in some parts tinted of a dark purple hue; at other parts it is whitish and dense, like ivory, blastema having been here thrown out so as to obliterate the spongy structure, the Haversian canals, the lacunæ, and canaliculi. The right lateral half of the section [as seen in fig. 2] also shows the presence of two carious abscesses in the interior of the bone, which communicate externally with *cloacæ* and the integuments. In one of these abscesses a piece of sequestrum is situated, partly detached. Vide plate, Figs. 1 and 2.

20th Feb'y, 766 Broadway.

Morbus Coxarius.—Dr. March and his Reviewer.

SUUM CUIQUE.

COMMON usage imposes upon the periodical press the obligation of pronouncing its opinion on scientific publications of any importance. This kind of review, however, that complies merely with a literary custom, is to the medical public neither desirable nor profitable. The duty of a reviewer is of a higher and more sublime order; he should lay before the reader the material that would enable him to judge for himself eventually of the merits of the work; he should also conscientiously analyze the inferences of

the author, drawn from the substance, and test their logical consistency; and to render the review still more useful, he should compare the mode, opinions, and results of the writer's researches with past and present doctrines on the same subject, in order to determine in what respect the publication is corroborative or novel. Such a review would furnish a reliable guide for the medical community, and would be both desirable and acceptable to the individual reader of periodicals. In the moment, however, the review trespasses the boundary of scientific objectivity; attempting to replace or to misrepresent the author's individual opinions with those of the critic, it turns out to be a polemic, which but rarely advances science or promotes any desirable purpose. The amount of acrimony and passion applied, qualifies its degree of decency and decorum.

As a matter of course, reviews of pure objectivity can be accomplished only by stern impartiality, and competency. Prejudice, superficiality, and malice, furnish but a poor medium for reviewing.

Such are the sublime claims which the medical profession are entitled to lay on critics; and the prompt compliance with these exclusively, will insure the influence and usefulness of the review. He who wishes to influence others, must place himself above all party spirit and cliqueism. That is the scale which I now apply to the review of Dr. Alden March's paper on disease of the hip-joint, in No. 2 of the American Medical Monthly.

In the very beginning, I am sorry to say that I meet with a designed acrimony of conception that is by no means called for; nor have the substance and the conclusions of Dr. Alden March's paper found that consideration and credit which the grave subject and the masterly manner deserve, and in which the talented and esteemed Professor of the Albany Medical College has treated it.

The grave charge of assumption, preferred against the author by the reviewer, I must leave him to answer; and believe the defence rests in able hands. But the deep interest which I take in the question mooted by Dr. Alden March, both as surgeon and writer, involves upon me the duty to secure, if possible, a fair discussion on the merits and bearings of the new doctrines propagated by the author and myself. A fair hearing is the least I should think we can expect from the periodical press; and my confidence in the impartiality of the American Medical Monthly is not so much shaken as to decide me against offering these pages to the columns of that journal.

For the sake of placing the reader at once *au fait*, it must be reiterated that Dr. Alden March, Professor of Surgery of the Albany Medical College, has read before the American Medical Association, in May last, a paper on hip-joint disease, subsequently published in the Transactions of that body, in which he stated,—

1. That he had carefully examined the numerous specimens of forty

anatomico-pathological collections, both of Europe and the United States, with a special view of ascertaining the real position of the caput femoris with the pelvis in hip-joint disease; and not finding one amongst all the specimens, the description in the catalogue notwithstanding, with the characteristics of spontaneous luxation, he drew the natural inference from such facts:

(a). That spontaneous luxation was by no means so frequent an occurrence as maintained by the majority of surgical writers; and consequently,—

(b). That shortening of the affected limb was not invariably attributable to spontaneous luxation.

2. That he had examined patients under his care, afflicted with hip-joint disease, in which the muscles were so much retracted and involved, that he was led to believe those deformities consequent upon that malady, were caused by undue muscular action.

3. The application of anæsthetics and splints proved beneficial in counteracting and removing the undue muscular contraction. He concludes that splints are a most estimable auxiliary in the local treatment of morbus coxarius, and recommends them to the notice of his professional brethren.

Dr. Alden March does not claim priority for those observations, nor does he dispense with constitutional treatment. His position, both as practitioner and scholar, places him above the imputation of having taken upon himself the credit of first recommending the use of splints in hip-joint disease. He leaves Dr. Physick's priority untouched, and satisfies himself by stating facts, and the results of his personal inquiries and observations. The paper is of a highly corroborative nature, and Dr. March is to be understood as having advanced our knowledge much beyond the mark of ordinary attainments. Dr. Carnochan and many others re-digest operations, in periodicals, which have been performed long before, and do not present any new features; but, nevertheless, they are read, and are expected to be wondered at. Wherefore, then, does the A. M. Monthly find fault with Dr. Alden March for having published his observations, and, moreover, on a subject just now of the deepest interest, and by no means sufficiently understood and semiotically appreciated by the profession? This is at least unfair, if not even unjust, and tends to render the benevolent and scientific intentions of the critic rather suspicious. If the A. M. Monthly considers itself justified to tender a review of six pages on the paper of Dr. March, I should conclude the *subject* of the paper itself was of no minor importance.

The review commences its attack upon the paper with a protest against the assertion of Dr. March, that the majority of surgical writers attribute the shortening of the afflicted leg to spontaneous luxation. According to my knowledge of surgical literature, Dr. Alden March is quite correct, and the reviewer proves himself of but shallow information. Liston, though

great as surgeon and author, is but one name, and no majority; whereas, on the other side, to quote but a few, G. L. Petit, Sabatier,* Camper,† Ford,‡ Porsal,§ Desanes,|| Albers,¶ Froken,** Boyer,†† Larrey,‡‡ Rust,§§ Langenbeck, Firske, Brodie,||| Wattman, and many others have clearly, and do still assert that a material shortening of the leg in hip-joint disease is invariably caused by spontaneous luxation, and the vast majority of practitioners of the present day still adhere to that very doctrine.

The more modern literature of surgery, however, especially that of the last six years, has decidedly altered this numerical proportion in favor of the new conception; but the majority is still against it. Some modern writers on this subject, premise spontaneous luxation in all cases of shortening; others admit it in some instances only (Liston), or allow only a nominal fraction, and this not as the necessary and unavoidable consequence of hip-joint disease itself, at the last stage, so to speak, but as an accident caused by a fall, jerking, pushing, &c., under predisposing circumstances. To these Bonnet, Lorinser, Buehring, March, myself, and others belong.

With the labors of all these inquirers notwithstanding, the present state of our knowledge on morbus coxarius is not yet sufficiently based on reliable facts; papers like that of Dr. Alden March are, therefore, highly acceptable contributions.

Evident as it is, that other writers have come earlier to those conclusions which Dr. Alden March brings forth in his elaborate paper, his labors may, nevertheless, be original. And if the reviewer has had a divination of the advancement of modern surgery in Europe, especially in France and Germany, he should not overlook the fact that the French and German literature is not as accessible to the multitude of medical practitioners in this country as it has been apparently to himself. Considered in this light, the merits of Dr. Alden March's paper are indisputable, having created interest and curiosity amongst the profession, in reference to the subject under consideration, which the reviewer has not excited by his superabundant knowledge.

* *Archive de l'Academie Royal de Paris. Tom. V., 791.*

† Camper's *Briefe Sieber das Friewillige Hinken der Kinder. Leipzig, 1784.*

‡ Observations on Hip-Joint Disease. London, 1794.

§ Porsal. *Observations de la Nature, &c. Paris, 1797. Page 200.*

|| *Œuvres Chirurgicales. Tom. I., p. 314. Paris, 1798.*

¶ *Preis Schrift. Wien, 1807.*

** *Preis Schrift. Wien, 1807.*

†† Boyer. 4th volume on Surgical Diseases.

‡‡ Larrey. *Memoires de Chirurgie Militaire. Tom. 4. Paris, 1817.*

§§ Rust. *Arthronology.*

||| Brodie. *Disease of the Joints.*

The review sides with Liston as to the material cause of the shortening of the affected member, and for this purpose quotes the views of eminent surgeons, namely, that the total carious destruction of the neck and head, and large trochanter of the femur, and of the acetabulum, &c., by itself sufficiently accounts for the shortening. From this opinion, I beg to differ, Liston's authority notwithstanding, and believe that the well-merited lustre of his great name will not pale under my opposition to his errors. In order to disprove the reviewer's arguments, I must refer to anatomy and experience. First, I must remind him of the fact that the neck and head of the femur do by no means materially contribute to the actual length of the limb, being connected with the thigh-bone below its superior extremity, and ascending, in males in an obtuse, in females in almost a right angle. A superficial insight into these anatomical conditions, shows at once, that, provided the superior fragment of the so extensively destroyed thigh-bone does not dislocate upon the dorsum ilii, it can not materially shorten the member, though it will approximate the acetabulum. The highest degree of such shortening could not amount to more than $1\frac{1}{2}$ inch. In consulting experience, we find cases in which the shortening varies from 2 to 6 inches; and nothing entitles us to premise such an enormous carious destruction; and its existence admitted, how account for the $4\frac{1}{2}$ inches above the amount anatomically allowable? Again, numerous cases come under observation where the hip-joint disease consists merely in synovitis, terminating at an earlier stage, where there is no caries at all, no sore, no discharge, no crepitus. What, may I ask, accounts, in these cases, for the shortening of the member, which may amount to as much as 6 inches, an instance of which is at present in the Orthopædic Institution? And finally, what accounts for the shortening of the leg, of more or less extent, in other diseases in the immediate vicinity of the hip; for instance, in sub-fascial abscesses, where the joint enjoys the most perfect integrity, and where, nevertheless, all appearances are present characterizing those deformities commonly dependent on hip-joint disease.

Thus, the accomplished critic tried to get a safe passage between Scylla (muscular retraction) and Charybdis (spontaneous luxation), and imagining himself to have got a firm ground for his anchorage (carious destruction), he will find instead, his vessel wrecked.

The reviewer is thus necessitated either to return to the obsolete doctrines of Petit, Sabatier, Rust, in premising spontaneous luxation in all cases of hip disease, complicated with material shortening; or, to accept the opinions advocated by Dr. Alden March and myself, as to the muscular cause of almost all malpositions and distortions collateral to morbus coxarius; or to advance some new theory; for that pathological interpretation preferred by Liston and the writer of the review, will absolutely not answer.

The prejudiced opinions of the reviewer do not allow him to conceive the anatomical possibility by which the abnormally retracted muscles contiguous to the hip could originate these deformities, and more especially, as he supposes the concerned muscles to be paralyzed, atrophied, and insensible. He nevertheless admits, at page 131,—

“That the malposition and distortion of the limb in hip-disease is the result of an instinctive muscular act, chiefly affected by volition.”

Thus, the reviewer condescends to allow the same interpretation of the collateral symptoms of distortion that has been preferred by Dr. Alden March and myself, although he chooses to apply other words. Indeed, this concession is more than could be expected from a reviewer whose purpose of opposing the author is so zealously manifested, though it must be left undecided whether it has been made only to escape the embarrassment in which, by adopting the opinion that carious destruction is the principal and material cause of shortening of the leg has placed him, or whether it is a mere phrase calculated to fill a space in the journal; or whether it is the proof of his finally perfected conversion; or whether the reviewer means to say that instinctive muscular action, in application to hip disease, is anything else than muscular reflex action, which I should term it.

Whatever it may mean, I am of too generous a nature to believe that the reviewer has knowingly intended to render himself a solidarical accomplice of our supposed errors and misconceptions. I shall therefore dispense with a concession, which was, perhaps, unintended. Nor am I disposed to charge the reviewer with making a logical blunder in placing on the same level “instinctive muscular act” with “volition,” two conflicting notions, and of a diametrically opposite nature.

I admit that the part displayed by volition, or muscular reflex action, upon the ultimate completion of deformity in hip disease, is not yet sufficiently inquired into; but, limited as is the present state of our knowledge, we are entitled to decide against volition, and in favor of “instinctive muscular act,” or muscular reflex action.

In the first start, it seems to my judgment a contradiction in adjecta, an absurdity, independent of the absolute impossibility of its accomplishment, to suppose for one moment, that, by his own exertion, and merely for the sake of relieving his momentary pains (the reviewer allows remissions), a patient should distort himself in such a fearful manner, rendering himself an object of pity, if not dislike, disabling himself for the execution of business requiring rapid and prompt locomotion; I say, if the deformity was brought on gradually by volition, it would imply also the possibility of reëstablishing, at least to a certain degree, the symmetry of the body by that very medium.

There are, indeed, numerous patients who possess sufficient determination

of will and perseverance, to accomplish the cure of their distressing distortion, provided it was all realizable.

But all exertions in this respect must fail, on account of the material shortening and unyielding rigidity of the flexor and adductor muscles of the thigh. I never heard of any cure having been consummated in this way, until I happened to read No. 1 of the A. M. Monthly. It is stated therein (vide Hospital Records), that by encouraging the movements of the affected limb, Dr. Carnochan had succeeded in removing the deformity and restoring the utility of the limb.* Incomprehensible as these startling results appear to a surgeon, who has acquired some experience on the subject, nevertheless, "Brutus says it, and Brutus is an honorable man."

When I took the liberty of visiting Ward's Island Hospital, about three months ago, the surgeon-in-chief, Dr. Carnochan, had the kindness to show me some of his patients affected with hip-joint disease. I found them all in bed, and apparently not much encouraged, and rather disinclined to move the affected limb, except by the pelvis in the lumbar articulation with the spine, as my patients had done also; and they were, moreover, as distorted and disfigured as any patient I had seen before, the most efficacious treatment of the accomplished surgeon-in-chief notwithstanding. On that very day, and in presence of Drs. Carnochan, Schilling, and numerous students, I placed a patient of the Hospital under the full influence of chloroform; the joint was perfectly moveable in regard of flexion and adduction, but we did not succeed in overcoming the rigidity of the flexor and adductor muscles, which resisted like rods of iron, in spite of chloroform and a considerable mechanical power. Dr. Carnochan was thus enabled, by an *argumentum ad oculos*, to infer that volition, at least in that case, did not retain the leg in its abnormal condition. This statement, of course, does not exclude the possibility that Dr. Carnochan should have, since then, accomplished his

It is proper to state, in this connection, that at the time of the publication of the passage to which Dr. Bauer here alludes, Professor Carnochan stated that our hospital reporter had, by the use of the word "encouraging," given an opportunity for mistake as to the principles of his mode of treatment. Prof. C. *allows* the patient to move if he chooses to do so, but he does not "encourage" him to move contrary to his inclination. This statement is intended not to meet Dr. Bauer's argument at all, but to do justice to this mode of treatment. The following is the passage as it stands on page 73: [*Editor American Med. Monthly*.

"The mode of treatment pursued by Professor Carnochan in morbus coxarius has been very successful. He relies principally on constitutional treatment, abandons the use of splints and confinement, permitting and encouraging the use and motion of the affected side, and allowing the abscess to open spontaneously. The number of cases now in progress of convalescence, the general improvement in the physical appearance of the patients, and the absence of the distressing hectic, indicate the soundness of the principle on which he proceeds."

wonderful cures of hip-disease. But even, admitted that volition should participate in the establishment of the deformity, the reviewer will, at least, concede that the voluntary muscular action very soon escapes the control of the will, and becomes subservient to the organic degeneration that invariably takes place in long-contracted muscles, yielding only to the knife.

Arguments and facts are very numerous which negative volition entirely, and affirm the supposition of reflex action as the proximate cause of malposition and shortening of the member. I shall enumerate but few of them.

1. The coëxistence of perfect *painlessness* in the affected hip-joint with the whole train of collateral symptoms constituting malposition of pelvis and leg. Why deformity, if volition is not proved to "defend the patient against pain?"

2. Coëxistence of pain in the hip-joint, with perfect absence of deformity. There is provocation; but volition does not choose to interfere in the symmetry of the frame.

3. Variety of positions of the affected extremity: straight, with outward rotation; bent-in hip and knee-joint, with inversion and inward rotation; bent-in hip and knee-joint, without inversion or eversion or rotation to either side, the knee approximating almost to the chin.

It cannot be conceived why volition should employ different means to obtain the same effect.

4. Inexpansibility and rigidity of the muscles during sleep and under the influence of anæsthetics. The will is dormant or suspended; the muscular retraction is still the same.

5. The patient feels almost instantaneous relief from his severe pain, if his leg is brought, by the assistance of chloroform, in a straight position, and retained there by mechanical contrivances. It follows, that the straight position is comparatively more advantageous, comfortable, and painless than the flexed and inverted condition of the affected extremity. Now, it cannot well be asserted, that the patient himself would consciously employ his muscular powers to aggravate his sufferings; it may be, therefore, concluded, that the morbid influence, prompting the muscles to contract, is anything but the will of the patient.

6. Bonnet, Buehring, Lorinser, Malgaigne, myself, and others, have succeeded in curing deformities of *recent* and *long* standing, originating from hip-disease, by the use of proper placement and extension. The daughter of Dr. McV., of Chicago, is just about to leave the Orthopædic Institution, in which she has been under treatment during the last four months. Her left leg was slightly ankylosed and immovable in the hip-joint, besides being $1\frac{3}{4}$ inches shorter than the other; the pelvis was also drawn up. She has regained the use and the natural length of the member.

Now, it is evident, that gradual extension would materially add, neither

to the length of the bones, nor alter their relative position to each other; nor would the physical properties of the ligaments allow any considerable elongation. But contracted muscles yield to a greater or less extent, in proportion with the advance of muscular degeneration into fibrous or fatty tissue.

7. The considerable emaciation of the affected leg appears to share with the muscular retraction the very same source of morbid innervation. At least, I cannot account for it by the discharge of matter, for many cases are devoid of it, nor by the want of exercise, which has no analogous facts; whereas, we find the same reduction of the circumference of the limbs in club-foot and club-hand, where morbid innervation is indisputable.

Even the characteristic pain in the knee stands in close relation to the muscular retraction. I have seen it returning as soon as the extension commenced, the disease having terminated five and ten years previously.

8. The pathology of other joints furnishes the same facts in reference to muscular retraction. Inflammation of the cervical vertebræ, and their articular apparatus, produces simple or double *caput obstipum*; affection of the dorsal and lumbar portions of the spine causes secondary retraction and shortening of the *psoas* muscles, with proportionate inflexion of the hip; inflammatory processes of knee and hip-joints are commonly accompanied by contraction of the flexor muscles, oftentimes, especially at the knee-joint, leading to subluxations in inflammations of finger-joints, or even in simple *panaritium*, we observe, and not rarely, a shortening of the corresponding flexor muscle.

All those collateral symptoms of reflex action are, of course, liable to modifications of every description, and according to the originating circumstances, as every injury of tendinous tissue does not always create tetanus.

If the talented reviewer would give his attention to Bonnet's book on *Disease of the Joints*, and to Brother Webers' on the *Mechanism of the Locomotive Organs*, and compare the results of their experiments in reference to the relative capacity of the articular cavities, the degree of tension and relaxation of their capsular and auxiliary ligament, in the various positions of the extremities, he would at once acknowledge his error in having, for one moment, taken the usual position of the leg, in hip-joint disease, as that of rest and relief, independent of the deformity itself, while the straight one should be preferred, both physiologically and pathologically considered. Miller's *Principles of Surgery*, if I am not mistaken, inculcate the same opinions.

The peculiarity of the position the affected member is prompted to assume, depends, indeed, not on the imaginary benefit the patient may be supposed to receive from it, but on both the preponderance of power of the flexor, adductor, and rotator muscles (conf. Fisk's *Statistic Observations on*

the Musculature of the Thigh, Henle and Pfeuffer's *Zeitschrift*, 1850), and excited innervation. And Borelli's denial that the motor power of a muscle, standing in the same ratio as the length of its fibres, dispenses with the obligation to call the reviewer's attention to the impropriety of comparing the relative powers of the pyriformis, gemelli, quadratus femoris, with much thicker, longer, and, under more advantageous leverage, inserted flexor and adductor muscles of the thigh.

The muscles principally involved in the distortion collateral to hip-joint disease, vary according to the deformity itself. In simple flexion of the thigh, the rectus femoris, tensor fasciæ latæ, gracilis, semi-membranosus, semi-tendinosus, and sartorius, are the principal actors; in flexion, inversion and inward rotation, the rotator, adductor muscles, iliacus internus, and psoas major are contracted.

The latter, in substantial shortening, approximates its attachment and insertion, spine and small trochanter; the patient, when recumbent, leans either his spine towards the affected side, for the sake of relaxing the muscle, or, when in erect position, raises the leg, and by that very means the pelvis, on the affected side. The coëxisting twisting of the pelvis, on its transverse and its longitudinal axis, seems to be a simple effect of the mechanical condition under which the contracture of the psoas muscle is placed. That this is no speculation, but a fact removed beyond further doubts, I had the opportunity of ascertaining in various cases, in which I removed, instantaneously, the said deformity—malposition of the pelvis included—by dividing the psoas muscle at its attachment, in corpses having died of the effects of hip-joint disease.

I need not reiterate that the reform before the operation was not possible. There is little doubt that, in desperate cases, tenotomy will prove just as effectual in the living body, and I shall perform it as soon as an appropriate opportunity offers itself. The third position of the affected leg (straight, slightly inverted, and rotated outwardly) depends, in my estimation, on effusion within the capsular ligament, the latter not yet being ruptured.

This is exactly that position which, according to Bonnet's and Guerin's experiments, the leg assumes when artificial injection has been made into the articular cavity. And I have never failed to find effusion when opening it by trocar or incision.

As indefensible as the arguments of the reviewer have proved to be in opposition with the well-matured views of the renowned author,—just as vague and superficial are his objections in reference to the therapeutic part of Dr. Alden March's paper.

Is there no further doubt that undue muscular action is the proximate cause of the deformities in question? is it, furthermore, admitted that the

muscles yield to extension as long as they are entire, and not degenerated ! what is more natural and reasonable than to apply splints, or other mechanical contrivances, in seasonable time to prevent, if possible, and to remove deformity ? The earlier this can be done, the more effectual it will prove. The reviewer does, however, not conceive its advantages. Well, he is perhaps young, and desires information. I will give it him. If a man suffers from spastic contraction, he needs but to extend the muscle by putting its antagonists into operation, and the cramp subsides immediately ; the same method has been followed with success in the treatment of the spastic affection in Asiatic cholera ; extension has been found effectual in the treatment of muscular contractions of others, especially of knee and elbow-joints, why not apply it against the same affection of the hip-joint.

True, extension does not cure morbus coxarius, nor is it intended or represented to do so ; other remedies are likewise to be put in coöperation, but it counteracts muscular retraction, prevents or removes the consecutive distortion, keeps parts of the joint in a desirable mechanical relation, and secures repose against accidental and undue movement. It may as well be added that it prevents the degeneration of the muscles concerned. The temporary disturbance of the patient does not bear any comparison with the material benefits to be derived from such treatment, which, though it does not cure hip-disease, removes at least one of the most aggravating collateral symptoms. Splints, moreover, do not prevent the patient from the enjoyment of fresh air, as the reviewer so much dreads. Is the disease more advanced,—stronger apparatus becomes requisite ; and, in extreme cases, the knife will effectually settle the question in reference to such deformities.

The critic is highly displeased with Dr. Alden March, that he has ventured to bring his local treatment before the profession, on account of its being neither novel nor effectual ; but what shall I say about the reviewer, who re-digests the whole therapeutic apparatus of the 18th century, the suggestions of Ford, which sound surgeons in England, France, and Germany have long since given up as useless, cruel, and irrational,—from which John Bell states, the patient “often dies from fever and irritations, great profusion of matter, and caries of the bone. If he survives, it is usually with a limb emaciated, crooked, hanging in air, and fixed by ankylosis of the femur with the haunchbone.”

Surely, such a result is neither satisfactory to any proper and high-minded surgeon, nor to the patient. I, for my part, have seen too much of the dreadful consequences of derivation with moxa and ferrum candens, Rust's panacea, to return to it, and therefore most respectfully decline to do so.

In conclusion, we cannot refrain from stating that the review of Dr. Alden March's paper, fabricated by a “great anonymous,” has entirely failed

to impress us either with the justice of his remarks, or with the logical soundness of his arguments. We cannot sanction the claim of the critic for competency on this important subject, nor is his mode of treatment commendable to either practitioners or students.

Being a foreigner, and by no means sufficiently familiar with the English language to rival the critic in the expression of my views, I concede to him superiority of diction, but feel warranted in claiming the superiority and soundness of opinions entertained by me in reference to the subjects in controversy. *But sapienti sat.*

LOUIS BAUER, M. D.,
Brooklyn Orthopædic Institution.

Feb. 12th, 1854.

PART II.—REVIEWS AND BIBLIOGRAPHY.

The Transactions of the American Medical Association. Instituted 1847.
Vol. VI. Philadelphia, 1853 ; pp. 866.

[Continued from p. 133.]

THE Report on the results of surgical operations in malignant diseases, by Dr. Gross, of Louisville (except the portions furnished by Dr. Warren, of Boston, and Dr. Hamilton, of Buffalo), extends through 158 pages of the Transactions. It is an elaborate compilation of the opinions of the highest authorities, American, English, and Continental, up to the present time ; and is divided into three parts.

I. The first part contains general observations on the nature, objects, and difficulties of the inquiry ; on the origin of malignant diseases—their hereditary nature—their latency—circumstances contra-indicating surgical interference—their tendency to reproduction after extirpation—general rules for their excision, and for their subsequent treatment.

We fully endorse the forcible remarks of Dr. Gross in regard to the reliance upon foreign authorities to the neglect of our own writers and teachers, which is but too common among American medical men. The necessity heretofore existing, of getting any American improvement in medicine or surgery endorsed by some learned society abroad, which results from this miserable tendency, has been alluded to in our first number, and we take pleasure in quoting his language.

"American physicians and surgeons seem to glory in being the slaves of European authority, in whatever pertains to their profession, both in matters of opinion and practice. Like Esau, they have bartered away their birthright for a mess of pottage; they are unwilling to learn anything that is purely American; they are too proud to acknowledge that anything good can emanate from a native author, and too stubborn to admit that one man knows more than another. They would rather at any time—lest they should seem to be indebted to their own countrymen—quote Louis and Chomel than Drake and Chapman, or Cooper and Brodie than Gibson and Mott."

Dr. Gross does not, of course, tarry to specify the causes of the miserable state of things in this respect. We shall return to this subject in a future number, merely remarking here that so long as the system, so prevalent in some quarters, continues, of seizing an English medical book as soon as it leaves the press, and "editing" it, as it is called, in this country, and thus very cheaply riding on to fame upon another author's back—so long, few competent American writers will find encouragement to write original works, and foreigners will still continue to write even our text-books for us.

Remarking upon the different malignant diseases, Dr. Gross states, "with all possible deliberation, that tubercular disease of certain organs—as, for example, of the lungs—is as malignant, as unforgiving, as any form of cancer of which we have any knowledge, or of which we can in truth form any conception." We must enter our *caveat* against the general adoption of this idea. Many a patient (though but a very small proportion of all affected) has expectorated tubercles from his lungs, and afterwards remained for years entirely free from any sign of pulmonary or any other disease.

In this Report, Dr. Gross divides malignant diseases into two classes: 1, *Cancer*, of three forms—schirrus [fibrous], encephaloid, and colloid; and 2, Melanosis. *Cancroid* affections [*epithelial cancer*] are semi-malignant, and most frequently attack the face [lupus, and noli-me-tangere] lip, tongue, penis, scrotum, and cervix uteri. True cancer may, however, also attack the parts just mentioned.

The three forms of true cancer are distinguished by the "cancer *cells*, and the cancer *juice*," neither of which is found in the *cancroid* affections.

We do not ourselves admit a *cancer cell*, which will distinguish cancer from all other morbid epigeneses; but if, in the same specimen, several or all of the *different* cells found in cancer be met with, it may be very safely pronounced a cancerous growth. Many a mistake in diagnosis has resulted from a belief in the *cancer cell*. Those who would know all the facts in regard to this subject, may consult Vogel's Pathological Anatomy, or Gluge's Pathological Histology, translated by Dr. Leidy.

The circumstances contra-indicating surgical interference in malignant diseases, are :

1. When it is congenital, or manifested soon after birth.
2. When existing in several parts of the body at the same time.
3. When it has made great and rapid progress, or broken through its original confines and invaded the adjacent tissues.
4. When there is a quickened state of the circulation, from the local irritation.
5. When there is serious disease of an important internal organ.
6. The sanguine temperament, or the hysterical condition, may contra-indicate operative procedures ; as may corpulence also, in case of cancer of the mammary gland.

The principal rules for the removal of malignant growths, are :

1. Remove every particle of the disease, by cutting through the healthy, at some distance from the diseased, tissues.
2. Remove the whole of an organ, though only a small part be affected. [This rule can, of course, be *rigidly* applied only in the case of glands.]
3. Preserve as much of the integuments as possible, in order, if possible, to cover the wound.
4. Prevent, so far as may be, the loss of blood.
5. Heal the wound, if possible, by the first intention.

II. The second part is an elaborate *resumé* of the opinions of American and foreign surgeons, on the general subject of excisions of malignant growths. It commences with a very valuable paper from Dr. J. M. Warren, of Boston, comprising a history of twenty cases of cancer in different parts of the body ; a summary of the operations for cancer at the Mass. General Hospital, from 1822 to 1852 ; and a record of 76 operations for cancer in Dr. W.'s own private and hospital practice. Then follows a table, evidently drawn up with much care, by Prof. Hamilton, of Buffalo, including the particulars of 59 cases of operation for cancer by himself.

This part concludes with the opinions, respecting the propriety of surgical operation in malignant diseases, of Drs. Eve, of Georgia ; Norris, of Philadelphia ; Pope, of St. Louis ; Hamilton, of Buffalo ; and the late Dr. McClellan, of Philadelphia, with a few cases by Drs. Warren, of Boston ; Palmer, of Louisville ; and Mussey, of Cincinnati. The most prominent European authorities are also next quoted. The results arrived at, will be found at the close of this analysis.

III. The third part contains a *resumé* of the results of operations for *cancer* in the different parts of the body, viz. : cancer of the mamma, of the

eye, the gums and jaws, the lips, the penis, the testis, the uterus, the anus and rectum, and of the bones.

The views on extirpation of cancer of the breast are given, of Hippocrates, Celsus, and other ancient authors; of Dorsey, Gibson, Physic, Parrish, Rodgers, Dudley, Twitchell, Atlee, Parsons, Knight, Mussey, Eve, Green, and Flint, of our own country; and of the most distinguished surgeons of Great Britain, France, Germany, Holland, Denmark, and Italy. The great success claimed by Hill, Flajani, and others, of this operation as performed by them, Dr. Gross thinks must be received with much allowance. He himself records an interference in a case of cancer of the penis. We have ourselves operated, as a matter of course, when the cancerous deposit is so situated as to produce a gradual closure of the urethra. He manifests the same want of reliance upon Lisfranc's results of excision of the os in cases of cancer uteri; with which all will doubtless accord.

But we finally state the conclusions arrived at. We have somewhat condensed the phraseology of Dr. Gross, but believe we retain its substance.

1. Cancerous affections, particularly of the mammary gland, have always, with a few rare exceptions, been regarded as incurable by the knife and escharotics. Nor does nature, nor any known internal remedy, cure a disease of this kind.

2. Excision, however early and thoroughly executed, is nearly always, in genuine cancer, followed by a relapse, within from a few weeks to several months after the excision.

3. Almost all practitioners, since Hippocrates, are averse to operative procedures after rapid growth, great bulk, ulceration, firm adhesion, organic change in the skin, lymphatic invasion, the cancerous dyscrasy, or serious constitutional derangement.

4. Operations are followed by more certain and rapid relapse in case of encephaloid than of schirrus [fibrous cancer].

5. Almost all the reports hitherto made of operations in cancerous affections are deficient in their details; and thus not contributing to a complete and thorough understanding of this subject.

6. Cancroid affections of the lip and skin [epithelial cancer] are less liable to relapse after extirpation than genuine cancer.

7. Still, a great majority of practitioners have always been in favor of operation in true cancer, especially in schirrus, before the tumor has made much progress, and before there is any evidence of disease of the lymphatic glands, or of the cancerous cachexy.

8. Many tumors, especially of the breast and testicle, which have been removed as cancerous, were, in reality, not so; and thus we may account for the astonishing success of Hill, of Scotland; North, of England; and Flajani, of Italy.

9. All operators insist on the five rules specified on page 3 of this analysis.

10. Much stress is laid by writers upon a well-regulated diet, and attention to the bowels and secretions generally, after extirpation, as a means of retarding or preventing a relapse. But no remedy or treatment known, has the power to prevent the reproduction of the morbid action after operations, however early or thoroughly the latter may be performed.

11. Life has occasionally been prolonged, or even saved, by operation after relapse; but, generally, a second is as incompetent to effect a permanent cure as a first extirpation.

On the following points, opinion is much divided, and further observation is necessary to decide either affirmatively or negatively.

1. Excision is of doubtful propriety in all cases in which the disease is of hereditary origin, or where it occurs in members of the same family. It is, also, in young patients, where the disease is of rapid growth.

2. It is doubtful whether an operation should be performed when the disease is attended by suppression of the menses, or by great irregularity of the discharge; or when there is a quickened state of the pulse, occasioned by the local irritation.

3. It is doubtful whether extirpation is proper when there are two or more coëxistent and accessible cancerous tumors.

4. It is supposed, but the fact is not established, that excision of carcinomatous tumors only tends to hasten the patient's death.

5. It is doubtful whether, all else being equal, the prospect of a permanent cure is greater after an operation on an old cancer, than on one of recent development.

6. The assertion demands verification, that the re-appearance of cancerous disease, after operation, is more rapid in robust women of sanguine temperament, than in nervous or lymphatic persons.

7. It requires to be proved, whether excision ought to be performed in the ulcerated stage of malignant disease, as a means of prolonging life, and procuring comparative relief from suffering.

Dr. Gross finally expresses his own convictions on the subject thus:—

“I have little, indeed, I might say no confidence, in any operation for malignant diseases, except the *cancroid* variety; and I have, for years past, deemed it my duty, as Professor of Surgery in the University of Louisville, to discourage a resort to the knife in all cases of the kind, especially in schirrus and encephaloid of the mammary glands; ample experience having satisfied me of the utter futility of such an expedient, however early and efficiently employed. In cutaneous cancer, on the other hand, my rule has always been to operate, provided the disorder has not advanced so far as to preclude the possibility of removing the whole of the morbid growth; and provided, also, that there is no evidence of constitutional infection.”

We shall be excused for the length of this analysis, since it includes all the principles which may be regarded as yet established, in respect to the surgeon's duty in operations for the removal of malignant epigeneses. And while we disagree with Dr. Gross as to the "utter futility" of such operations, in *all* cases whatever, of true cancer, we cheerfully accord to him the merit of having exhausted the subject in the present state of our science, and thus having established a new stand-point and foundation for future investigations.

"On Acute and Chronic Diseases of the Neck of the Uterus. By CHARLES D. MEIGS, of Philadelphia."

WE give the literal title of this paper as it appears in the Transactions of the American Medical Association. The second sentence of the Report is as follows: "The Committee have not understood that they are commanded to present a complete summary of whatever has, of late years, been proposed by numerous writers upon this topic; and have, therefore, prepared such a report as they venture to hope may, to some, prove as a help to clinical practice in an important and extensive department of medical and surgical treatment." We propose, then, to examine the report with reference to its value as an aid to "clinical practice." We shall not stop to consider the question, whether the "Committee"—viz., Prof. Meigs—has rightly understood his duties, or whether it was the intention of the American Medical Association to get at the peculiar views of Dr. Meigs on this important subject.

The report first discusses the morality of physical exploration in uterine disease. In this part of the paper, the use of the offensive word "speculum" is adroitly avoided, "metroscop" being substituted. It is very gratifying to learn that "the Committee do not find themselves called upon to discountenance and reprobate the prudent and necessary employment of the modern methods and instruments intended to improve the means of diagnosis and surgical treatment of diseases of the cervix uteri, conceiving that this is a matter to be left to the conscience and judgment of their brethren, whenever the occasion may require." But the main argument on this point, is found in a subsequent part of the paper, in the following words: "The most essential element of a successful practice exists in a positive diagnosis. It will not do for us to believe, or suspect, or infer, this or that—we must guard the interests of the patient, by knowing it is this, or that, or the other form and stage of a disease."

The report next gives some hints and directions in regard to physical exploration and diagnosis of uterine disease. This is illustrated by three engravings.

Those familiar with the treatment of uterine disease will agree with Dr. Meigs, that "experience has shown that many instances of bad health in women are to be attributed to acute or chronic ailments of the womb, where no topical pain or other sign of local lesion is complained of. Thus some of the examples of perverted innervation exhibited in torpor of the bowels, chronic tympanitis, frequent attacks of spasm and general convulsion; cephalalgia, palpitation of the heart, pain in the back, loins, and lower extremities; fluor albus and aggravated hydæmia, take their origin from disease of the cervix uteri." Nearly all will agree with him also, that leucorrhæa, when at all serious, is a symptom of inflammatory disease of the cervix, and that "a vaginal injection for inflammation of the canal of the neck, is simply ridiculous." He properly insists upon the importance of an accurate diagnosis of the pathological condition on which this symptom depends.

"Where the touch gives sufficient information, let the touch suffice; but if any doubts as to the wants of the case remain, then a metoscopic examination should be made."

In illustration of this part of the subject, Dr. Meigs gives three colored engravings (plates 5, 6, 7), and a sketchy description of the cases from which the illustrations were drawn. There is nothing novel or peculiar either in the character of the cases, or the mode of treatment adopted for their cure. At an earlier period in the history of uterine pathology, these cases and illustrations might have been of some value, but it is to be supposed that every well-educated member of the profession, and certainly every member of this Association has, at this day, some slight knowledge of the writings of Bennet, Simpson, Whitehead, Churchill, Kennedy, &c., to say nothing of the eminent French and Continental writers on this subject. To be sure, the description of the appearance of the cervix, in cases of troublesome leucorrhæa, is somewhat original. "One or both lips of the womb will be found tumid, softened, granulated, or botryoidal in appearance, and of a uniform red; or else drusy as to the surface," &c. Do these words, "botryoidal" and "drusy," mean anything in this connection? Inflammation can never make the cervix "*botryoidal*," nor can the mucous membrane ever be said, even by a forced analogy, to present a "drusy" appearance. Prof. M. evidently plumes himself on a new point, which he makes in the treatment of these inflammations, viz.: the "antiphlogistic contacts" of the nitrate of silver. We give his own words, without comment, that our readers may judge for themselves: "It is undeniable, that a pencil of nitrate of silver, applied to a soft, moist, living tissue, and held long in contact with it, will disorganize the tissue, and so prove to be a destructive contact. It is equally undeniable that a contact may be effected with such rapidity and lightness as to prove ineffectual or indifferent, while there is another mode or force which does resolve inflammation with great certainty;

and this is the antiphlogistic contact spoken of above. We therefore feel warranted to speak of such use of the nitrate of silver as being either destructive, or indifferent, or antiphlogistic contacts; and experience confirms the propriety of the classification; for we meet with numerous examples of treatment that conclusively prove it is not the mere treatment by escharotics that is so successful, but the use of them in such a way as to provide for their due operation as antiphlogistics, and not as destructives."

Several pages of the report are devoted to the consideration of retroversion of the uterus. We are met at the outset with the astounding statement that "Reporter has long been fully convinced that retroversion of the womb constitutes seventy-five per cent. of all cases of sexual disorders of a gravity sufficient to require appeal to medical advice." As we learn from another paragraph in this paper, that the Reporter has had "an immense experience in a populous metropolis,—an experience greatly increased by the resort of numerous invalids from the country, and from the different United States," we are compelled to believe that the reporter must have met with an epidemic of retroversio uteri. We are certain that in this suburb of Philadelphia, retroversion of the womb does not constitute ten per cent. of "the cases of sexual disorder of a gravity sufficient to require appeal to medical advice." Dr. Meigs devotes several pages to the consideration of this subject, his object being mainly to illustrate the tendency of the retroverted uterus to hypertrophic development and inflammatory disease of the cervix. That these pathological conditions are frequently associated with this displacement, is admitted by all. The following extract from the excellent Dissertation on Displacements of the Nongravid Uterus, by Dr. Peebles, of Petersburg, Virginia, presents this point much more clearly than all Dr. Meigs says, with his detail of cases and colored engravings. "The malposed uterus, in both forms of its version, presents great uniformity in its condition. I believe that all writers are agreed that it has associated with it a structural change, to which the term engorgement is applied. I have never seen it absent. This engorgement may present itself in varying degrees of intensity. I shall describe it in the two extreme states in which it may be found, leaving the reader to infer that it may exist in every conceivable grade between them. It may be partial, or it may be general, involving the whole organ. In the former case, it is always seated in the dependent surface of the organ; that is on the posterior wall in retroversion, the anterior in anteversion. To the touch it presents a slightly raised and generally smooth, though often irregular, and sometimes lobulated surface, which is denser than the natural structure of the part, and may be exquisitely sensitive. I have often felt it in retroversion, occupying a spot on the posterior wall of the uterus, not larger than an almond, with well-defined edges, where it joined the healthy structures. In such cases, the remaining portion of

the organ, including the cervix, may be perfectly healthy and natural. Generally, however, the whole pendent surface of the uterus is involved. * * Engorgement, resulting in hypertrophy, is, then, the pathological state of the retroverted nongravid uterus. It is, in a large majority of cases, the only morbid state found to exist in the organ, when its malposition does not depend upon extraneous causes, such as tumors within the walls of the organ, and similar morbid states of its environs."

We are by no means certain that this pathological condition is not more frequently the cause, rather than the consequence, of the malposition. We have certainly, in some cases, succeeded in curing the engorgement and inflammation, with a total subsidence of uterine symptoms, when we have not been able to cure the retroversion.

In those cases where the retroverted organ is not movable by the hand, Prof. M. effects reposition by means of caoutchouc bottles, filled with curled hair, a method proposed by M. Hervez de Chegoin. In another part of the paper he says, "In more than one remarkable case we have found the fundus fastened down in its unnatural bed, in the pelvis, by means of strong adhesions, which it was necessary to divide with the scalpel before we could reduce the uterus to its proper position again!!" For the radical cure of this displacement, he makes use of an annular pessary, made from watch-spring, coated with gutta percha dissolved in chloroform. We take it, our readers are familiar with the method proposed by Prof. Simpson, and the modifications of his plan proposed by M. Valleix. Of the comparative value of these modes of treatment, we must leave them to judge. We will only say that we are convinced that there are some cases which can neither be cured by the stem pessary of Prof. Simpson, or the "*redresser*" of M. Valleix, or the annular pessary of Prof. Meigs, or the barred pessary of Prof. Hodge, so strongly recommended in the valuable Dissertation of Dr. Peeble's, to which we have before alluded. In a future number of this Journal we propose to discuss the treatment of retroversion much more fully.

We shall not stop to examine that part of the report devoted to vivaces, polypi, and other morbid growths which excite uterine hæmorrhage in the inter-mensual periods, as we find nothing which has not before been well known to the profession.

The following case is interesting and uncommon. "The patient was a very robust and stout, married woman, aged about thirty years, less or more. She had children. Complaining of frequent attacks of irregular menstrea, she appealed for advice to a physician, who, giving an unfavorable prognosis, so excited her fears and the anxiety of her family, that Reporter was invited to form an opinion on the case. The vagina contained a substance of the size and shape of the red mass which in Plate 18 is seen springing from the anterior aspect of the vaginal cervix. To the touch, it communi-

cated the impression always produced by touching the tissues in schirrus or carcinoma uteri. It had the same resistance and roughness, or grater-like feel that belong to cancer of the womb or vagina. The gentlest touch caused it to bleed. It was not sensitive, so as to be intolerant of pressure. The posterior aspect of the cervix gave by the touch the idea of normal tissue, and this was likewise the case as to the lips of the os tincæ; and, indeed, all the accessible parts of the womb seemed to be perfectly sound and healthy, save only where the peduncle or root of the malignant mass arose from the anterior aspect of the neck. The vagina was everywhere quite healthy." The mass was removed by ligature, and the base was destroyed by acid nitrate of mercury. Every vestige of diseased structure was removed, and the lady has enjoyed good health for three years.

In concluding our notice of this paper, we must frankly confess that it has greatly disappointed our expectation. Prof. Meigs is well known to be an eminent teacher in the largest school in the United States, and a most successful practitioner. This report is unworthy of his distinguished reputation, and unworthy of the expensive publication which it has received from the American Medical Association. In fact, it is no report at all. We think Dr. M. entirely misconceived the duties assigned to him. The Association surely had a right to expect a careful and complete resumé of what is known in regard to this interesting and important class of diseases. It certainly savors of presumption on his part, to suppose that they would have incurred all this expense merely to get at some of his clinical experience. And then as to its value as a "help to clinical practice," we must say, that those familiar with the subject will learn nothing that has not before been presented in a clearer light; and we fear that those who are not familiar with the subject will learn little by the perusal of this paper, in regard to the pathology, diagnosis, and treatment of "Acute and Chronic Diseases of the Neck of the Uterus." Had Prof. Meigs been a young man, striving to obtain an honorable position, we should have ignored this paper; but knowing that he could have done better, we have felt that our duty to the American Medical Association, and our duty to the profession at large, compelled us to express our honest convictions.

(To be continued.)

Functional and Sympathetic Affections of the Heart. By JOHN W. CORSON, M. D.

WE have received from the author a pamphlet of thirty-one pages, with the above title; the same being a paper read before the Society of Statistical Medicine, and also published in the last (Jan., 1854) number of the New York Journal of Medicine.

Dr. Corson has enjoyed rare opportunities for investigating this class of

diseases, both while physician to the Brooklyn City Hospital, and, since, as one of the physicians to the New York Dispensary; and this is a very valuable contribution to this very important subject.

We became impressed, some years since, with the great mischief resulting to patients, from their medical advisers mistaking functional for organic diseases of the heart—both as a consequence of injudicious medication, and of the intense anxiety unnecessarily produced. We have also long held and taught, that much the greater number of all the cases of heart affection brought to the notice of physicians, belong to the class considered by Dr. C. Of twelve patients who consulted us within as many weeks, in the spring of 1850, each having been under the care of some physician at a distance from us, and all having been assured that they had disease of the heart, and that they might die at any moment therefrom—*only two* had any organic affection, as both the diagnosis at the time and the subsequent effects of the treatment advised, enabled us to decide. And, in view of the intense mental suffering unnecessarily inflicted upon those who have been thus deceived, we fully adopt Dr. Corson's proposition, viz.:

"In all doubtful cases, it is always best to defer giving an *unfavorable* opinion, till we have made repeated examinations, after exercise and quiet, and until after the test of treatment."

Dr. C. very truly remarks, that many of the marked symptoms of organic disease of the heart have their close functional imitations—as violent palpitations, unnatural impulse, bellows murmur, intermittent pulse, præcordial pain, fainting with difficult breathing, or even swelling of the feet. The following table, however, very clearly contrasts the variations of several of the prominent symptoms in these two classes of cardiac affections (p. 10).

IN FUNCTIONAL AFFECTIONS.

Præcordial dulness on percussion is not permanently *extended*, nor the *apex displaced*.

The *impulse* in *plethora*, is strong *bounding*; in *irritation*, smart *knocking*; in both, wildly *jarring*; in *debility*, small, soft *tapping*, sometimes *hurried*.

The whole *movement* of the heart is more *elastic*, *light* and *easy*.

Functional murmurs are *soft blowing*, *aortic* and *systolic*; are from *anæmia*, and usually with venous hum in the neck.

Functional is more *paroxysmal*.

Active exercise is often well borne, and benefits.

The *causes* are mainly *dyspepsia*, *anæmia*, *plethora*, *nervous*, or *generative* [genital] disease.

IN ORGANIC HEART DISEASE.

Præcordial dulness in enlargement is permanently *extended*, and the *apex crowded to the left*.

The *impulse* in *hypertrophy*, is strong, broad *heaving*; in *dilatation*, weak, wide *flapping*; in both together, strong, large *bulging*; in all, with *extended dulness*.

The whole *movement* of the heart is more *dead*, *clumsy*, or *labored*.

Organic murmurs are *harsher*, *louder*, often *grating*, *aortic* or *mitral*, *systolic* or *diastolic*, or both, and very rarely with *anæmia* or venous hum.

Organic is more *uniform*.

Active exercise always *aggravates*.

The most common *causes* are, first, *rheumatism*; next, *Bright's disease*.

The causes enumerated of functional affections of the heart, are the *sanguineous, muscular, nervous, mental, digestive, generative, and irritative or poisonous*. The three morbid conditions—of which one usually predominates—in such cases, are, congestion, irritation, or debility.

Congestion may be due to plethora, over-exertion, revulsion, or emotion.

Irritation and *debility* may both be nervous, hysterical, anæmic, dyspeptic, uterine, or spermatorrhœal; and the former may also be mental. The action of all these causes, both of irritation and of debility, as well as of congestion, is illustrated by cases. We have ourselves prescribed for a case, within the last month, of violent palpitations, with a sensation of a living animal moving in the stomach, an intermittent pulse, and a dry, hacking cough; all of which symptoms, after continuing several weeks, were at once removed by copious enemata, which removed a large mass of hardened scybalæ. This was the only treatment adopted, and there has been no return of the symptoms.

The whole paper evinces much discrimination, and accurate study of the diseases under consideration; and very few, comparatively, can appreciate the amount of labor and observation on which their classification, as above, is based. We hope to see the author's views still farther expanded and illustrated in a volume ere long to be published by him.

In regard to the *treatment* of this class of diseases by Dr. Corson, we can merely allude to the use of *nux vomica*, or its alkaloid, by him, in cases of *debility* of the heart, as a beautiful deduction from Dr. Marshall Hall's experiment of rousing the nervous system of the frog when stunned by the division of the spinal chord, by applying the acetate of strychnia; together with the results obtained by Prof. E. Weber, who, by the same application, produced *tonic contractions* in the palpitating heart of the frog after it had been removed from the body. Dr. C. gives five drops of the strong tincture of the *nux*, three times a day, gradually increasing, if required, to 15 drops; or the same quantity of a solution of one grain of strychnia in 3 vi. water and 3 ii. of acetic acid. †††

PART III.—CHRONICLE OF MEDICAL PROGRESS.

[The abstracts and translations found under this title are made expressly for the AMERICAN MEDICAL MONTHLY.]

ANATOMY, PHYSIOLOGY, AND GENERAL PATHOLOGY.

On the Phrenic Nerve in Man.—By Prof. LUSCHKA, of Tübingen. The following are some of the principal conclusions embodied in a recent monograph upon this subject.

The phrenic (diaphragmatic) nerve *originates* always principally from the fourth cervical nerve; and entirely from it in most cases. In some cases, it rises from both the fourth and the third nerves. Hence, lesions of the spinal cord, in the region of the fourth nerve, sometimes completely impair the motions of the diaphragm, and in other cases, do not—certain filaments also entering it from the third nerve. Frequently we find these two different origins on the two sides of the same subject.

This nerve is both motor and sensory, like all the cervical nerves. Some of its branches, moreover, as that going to the substance of the liver, contain fibres of the great sympathetic.

The phrenic nerves communicate,—1st, freely with each other, by a free interchange of fibres; 2d, variously, with the great sympathetic; 3d, only at times, with the hypoglossal, and then, since only certain fibres of the ramus descendens hypoglossi unite with the phrenic, and these same originally entered the descendens from the *third* cervical nerve—these are shown to be really fibres of origin of the phrenic itself.

With the pneumogastric, the phrenic is *never* connected at all.

It must be also remarked, to show the importance of Prof. Luschka's investigations in semeiology, that the fourth cervical nerve giving off usually the whole, and always most of the phrenic, also sends off large branches to the shoulder and external clavicular region; and that the third cervical nerve, sometimes affording a part of the phrenic, also gives fibres for the superficialis colli, and to the risorius Santorini muscle, and also fibres communicating between the superficialis and the facial nerve. The sardonic laugh, occurring in injuries and inflammations of the diaphragm, is an instance of reflex (diastaltic) action, to be explained by a reference to the connections just pointed out.

[In other words, the trunk of the third cervical nerve (sometimes) gives off a part of the phrenic to the diaphragm (through the descendens hypoglossi, as just explained); and also gives fibres through the superficialis colli to the risorius Santorini, and indirectly, also, through the branches of the facial nerve. And the fact of irritation in one of these subdivisions in the diaphragm producing contractions in muscles supplied by the other, is an instance of mere diastaltic action. If, however, *pain* is produced in a distant part, instead of contractions—viz., pain of the shoulder in case of inflammation of the liver—this phenomenon is parallel to that of neuralgia in the first or second branch of the fifth pair of nerves, caused by a carious tooth in the lower jaw—i. e., by irritation of the third branch of that nerve.

We have just seen that the fourth cervical nerve-trunk sends fibres to the shoulder, and external clavicular region; it also sends fibres to the liver, through the phrenic, as will next appear.—E. R. P.]

The *branches* of the phrenic are: 1, those interchanging between the two phrenics; 2, those distributed to the diaphragm; 3, to the costal and diaphragmatic pleura; 4, to the pericardium; 5, to the liver and its serous envelope; 6, to the mediastinum; 7, to the peritoneum lining the diaphragm, and the abdominal muscles down to the umbilicus; 8, to the inferior vena cava.

The costal pleura, diaphragmatic pleura, and mediastina, and the substance of the liver, receive branches from the sympathetic as well as the phrenic. The pulmonary pleura is supplied solely by the pneumogastric, and the pericardium from all these three sources just mentioned. The hepatic peritoneum is supplied solely by the phrenic, as is also the diaphragmatic, and that lining the abdominal parietes to the umbilicus.

The following are some of the semeiological applications of the preceding facts:

a. The sardonic laugh is a symptom of inflammation of the diaphragm. The channels of this diastaltic act have been already explained. The similar, but less pronounced expression, in peritonitis (especially when chronic) is explained in the same way.

b. Paroxysmal vomiting is common in inflammation of the diaphragmatic peritoneum, or the diaphragm itself. This reflex action, also, like the sardonic laugh, has the branches No. 3 of the phrenic as its incident or esodic nerves.

c. 1. Pain in the right shoulder and clavicular region (or in both shoulders) is a symptom of inflammation of the liver, and especially of its serous envelope. 2. Pain of the left shoulder, often extending to the elbow, may occur in pericarditis. 3. Pain in the shoulder is also common in pleuritis, on the side inflamed. The 1st case is explained by reference to the fourth preceding paragraph, and to the branches No. 1 in the third paragraph preceding; the 2d case, by reference to branches No. 4; and the 3d, to branches No. 3. [If, however, the pulmonary pleura alone is affected, we should not expect to find the pain above-mentioned present as a symptom. The pain referred to the side in pleuritis is probably in the phrenic alone; but mere *pleurodynia* may be either in the intercostals or in the phrenic; and hence, derangement of the liver may produce it.—E. R. P.]

d. Pain about the umbilicus occurs in inflammation of the diaphragmatic or parietal peritoneum. Branches No. 7 will explain this symptom. They also do, the pain in vomiting in peritonitis.

[e. The branches of the phrenic to the inferior vena cava associate the action of the liver and diaphragm with that vessel, in some way not yet understood.—E. R. P.]

The Typhous Process under expectant treatment. By G. ZIMMERMANN, of Hamm.

THE author maintains that the treatment of the typhous process may be still more expectant than is customary, and that it is only in this manner that certain unsettled questions can be solved; some of which he endeavors

to answer. [In this way alone can we obtain the *natural history* of the process in question.]

He treated a considerable number of typhus patients of both sexes, without any internal remedies. In addition to a proper diet, fresh water and fresh air, nothing was administered except gum-water, and, at times, a warm bath or cold effusion, when the torpor or delirium became too severe. Where the affection of the lungs (splenization) suddenly supervened, and was attended by an increase of the existing fever, the author practised a small blood-letting, and commends the result.

With reference to the course of the disease, he separates the *local* from the *general*. As a *general* disease: the typhous process is considered typical throughout; has its stage of rise, status, and decline, and terminates, in the more moderate cases, in 21 days; and in the more severe in 28. The local accompaniments of the typhous process may commence and terminate at very different periods; and the duration is also very difficult to determine.

For the determination of the development and recession of the typhous process, it is an important point to ascertain the peculiar heat by the thermometer, and to examine the urine. Up to the 14th day, this peculiar *heat* remains almost uniformly between 38.7° and 40.5° (average, 40.2°) centigrade (104.36° Fah.); from this period it diminishes to between 37.5° and 40° (average, 38.8°); or 101.8° Fah.—which corresponds to the stage of decline. With the 21st, or the 28th day, it reaches its normal degree, and hereupon convalescence begins; during which the remaining anatomico-pathological disturbances are repaired, and the restoration of the loss in the corporeal mass proceeds. Zimmermann thinks that the temperature is the surest—because a physical—measure of the strength of the fever: the *pulse* is less certain, and teaches only what influence the abnormal blood has upon the vascular system, and the nervous centres regulating it. Yet, according to his experiments in this disease, the frequency of the pulse is in tolerable harmony with the temperature.

In the *urine* the quantity of uric acid increases up to the 14th day, when it is almost uniformly doubled, and then diminishes again until, at the 21st or 28th day, it reaches the normal standard. On the 21st, or 28th day, the quantity and color of the urine is usually changed; the urine is increased twofold, and becomes lighter. With the 4th, 7th, or 14th day, the urine becomes dull, and forms of itself, or by the addition of acids, a lateritious sediment. This spontaneous clouding of the urine Zimmermann considers as a sign that an acute process has, in itself, the disposition to terminate in recovery, if it is not disturbed in its natural course.

The affection of the *nervous system* accompanying the typhous process, takes an increase with the eighth day, and attains its height at the fourteenth day, and then gradually declines; its crisis is a sound, quiet sleep. The sweats are to be considered as critical evacuations; they take place in the typhous process left to itself, with alleviation of certain phenomena, always about the seventh and fourteenth days, and, afterwards, several times at intervals. The *local disturbances* begin gradually, and are first observable when they attain a certain force; their disappearance is not noticeable.

The affection of the *intestinal canal* manifests itself by an albuminous diarrhoea; it also sometimes arises suddenly. Zimmermann considers it a necessary process for the removal of the products of the alteration of the blood, and leaves it to itself; usually, after an existence of eleven days, an

abatement of the local phenomena occurs; by the fourteenth day, the evacuations become pap-like, free from albumen, and sometimes even solid. If ascarides are expelled, it happens constantly about the 14th day of the disease.

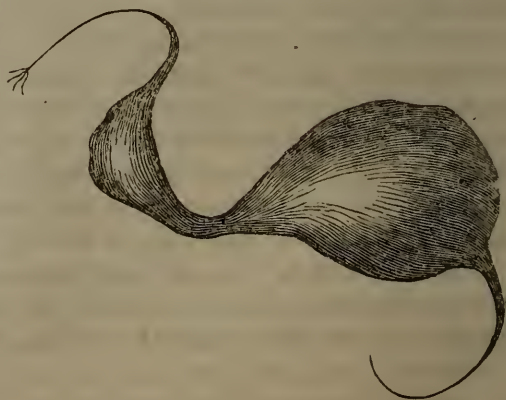
The affection of the *lungs* [splenization] took place in all our author's patients, but at different periods, from the 6th to the 16th day; when it occurred after the 14th day, the intestinal affection had already begun to moderate. Simultaneously, a considerable increase of heat and respiration took place, but with a gradual improvement: it had no influence upon the fever, and had generally run its course in 21 days. Upon its sudden super-vention, Zimmermann practised a small blood-letting, whereupon the symptoms abated. He considers the splenization a passive anomaly of the circulation.

The affection of the *kidneys* was absent only in slight cases. The fibrinous cylinders from the renal tubuli are characteristic; they are found in variable quantity between the 4th and 15th day, generally simultaneous with albumen. When the typhous process lasts 4 weeks, they remain till the 21st day; when three weeks, they disappear about the 18th day. For the most part the patients had pain in the renal region, which was increased by pressure.

The affection of the *spleen* was never wanting; its engorgement began with the second week, at the commencement of the diarrhoea, and earlier when this was earlier. The maximum of engorgement corresponded with the height of the intestinal disorder. Sudamina were rare; petechiæ never appeared; roseola did in every case. Zimmermann has never observed *sequelæ* after this simple treatment.—*Deutsche Klinik*.

New Entozon.—Dr. S. Mitchell describes, in the *Boston Medical Journal* for February 15th, what he believes to be a new entozon. We copy his description and cut; of the latter he says, it is a perfect facsimile as to size and shape.

"This and another similar one was passed by a little girl about 5 years of age, after taking a dose of calomel. The color was much like that of the lumbricoides. It was alive, and would writhe what appeared to be its tail for some time after its expulsion. Its anterior extremity has the appearance of a miniature elephant's proboscis, and was fimbriated at the end. There was no appearance of any other extremities." As will be seen by the drawing, it has much the shape and appearance of a young bird, minus legs and wings.



"The patient had long been complaining, and was much emaciated; had variable appetite, pain in the bowels, constant diarrhoea, and other symptoms of verminous irritation. She had previously been treated with various vermifuges without success. Several weeks after passing these, her symp-

toms not having mended any, and all other anthelmintics having failed, it occurred to me to use the pumpkin seeds. Accordingly, I directed the mother to rub up two ounces of the seeds and make an emulsion, and give one half at a dose, and the balance to be given in two hours; and this to be followed by half an ounce of ol. ricini. The first dose was given, which appeared to produce very alarming effects, the child writhing and screaming with pain in the bowels. The balance of the emulsion was, therefore, not taken, but a dose of oil was immediately given, which operated powerfully, in a short time bringing away over one hundred of this kind of animals. None of them exceeded in size the one I had in my office, but varying from that down to a very minute size. After their expulsion, the patient rapidly regained her health and strength."

PRACTICAL MEDICINE AND MEDICAL PATHOLOGY.

Infusoria in Woman's Milk.—In a communication published in a recent number of *Schmidt's Jahrb.*, Dr. Vogel states, that he has discovered infusoria, similar to those found in the incrustations upon the teeth, in that milk which induced sickness in the child, and destroyed the mother's health. If examined immediately after its removal from the breast, no general decision can be given as to whether a woman may suckle or not. In every case the question must be determined by a microscopic examination of the milk. Such animalcules are found especially in women who menstruate or suffer from hæmorrhages during this period. The milk has often a fine, thick white color, or is of paler hue; its consistence may be either thick or watery; its reaction is often alkaline, but generally neutral. Under the microscope it exhibits, according to its richness, sometimes but a few, at other times many, milk and cream corpuscles; these differ from the corpuscles of healthy milk by their pale yellow color, their want of metallic lustre, and their speedy decomposition. As regards the infusoria, they are little rod-shaped bodies, dark in the middle, surrounded by a lighter line, but exhibiting neither head nor tail under a magnifying power of 600 diameters; there are, however, feet in great number and of considerable length. The movement of these animalcules was swimming, and occasionally it was very active. Forward movement was wormlike, and an annular structure of four rings was observed. Mostly they twist screw-like, upon their axes. When they swim in a circle, they always swim from right to left. The length is $\frac{1}{100}$ mmtr., their breadth four times less. They are best seen when the milk is diluted with water. In ammonia, diluted acids (even the lactic), they die immediately.

Children fed upon milk containing these infusoria, become sooner or later attacked by diarrhœa, and the evacuations are of a green color. This condition disappears as soon as healthy cow's milk is substituted. The author believes that this effect does not proceed from the infusoria as such, but from the same cause which produces the infusoria, namely, a process of fermentation in the milk itself. The ferment is, according to him, the congested and increased heat in the breasts, connected with the general excitement of the sexual system.—*Medical Times and Gazette, London, November, 1853.*

Apoplexy of the Uvula. By DR. SPENGLER.

At a time when acute catarrhs were quite prevalent, a seamstress, twenty years of age, came to me in haste, saying, that while eating some soup a few minutes before, something had lodged in her throat. Upon inquiry, she stated, that in the morning she had gone to church, perfectly well; and that upon returning home, she had sat down to eat some soup; but at the first spoonful something caught in her throat. The soup was not hot, and consisted merely of beef-broth, without any admixture of solid materials. As I caused her to open her mouth, and pressed down the tongue, I saw the uvula with its inferior half lying upon the root of the tongue: it was elongated and thickened, and had a dark blue color in its inferior half, and the appearance as if a fully distended, very delicate, shining vesicle, filled with a dark blue fluid, were bound about the whole lower half of the uvula; the whole diseased part was of the size of a bean. The diseased part was separated perfectly from the healthy, the border was exactly defined, so that by the side of the dark blue began immediately the normal color of the upper half. As I touched the uvula with a spatula, a drop of thick, dark, coagulated blood flowed from the most depending point, upon the spatula, and the patient complained of a stinging pain, while she observed, "*that is exactly the spot where it sticks in my throat.*" Swallowing was performed without any great difficulty; but the substance swallowed, in passing by the uvula, produced in the latter a pricking, and caused each time a sensation as if a certain point in the throat was obstructed by a pointed foreign body. This feeling was the only symptom of which the patient complained. Neither the respiration nor the organ of voice presented any symptoms. The girl was also perfectly well in all other respects. I ordered a gargle of alum water, although it was with difficulty that I could convince the girl that nothing had lodged in her throat.

The gargle was twice colored with blood. But the next day all the difficulties of deglutition had vanished, the uvula had nearly its normal length and thickness, but the inferior half was yet somewhat nodulated, of a dirty dark red, no longer violet colored, but still shining. The general health was excellent. Upon the third day this redness had also disappeared, and the patient was discharged, cured.

This form of extravasation in the uvula is rare. I have already often observed extensive epidemics of angina, but had never before seen a case of this kind. It is rarely mentioned in medical literature.

As regards the etiology of this disease in the present case, the existing epidemic constitution disposes to hyperæmia of the mucous membrane of the fauces and air passages. Through the long tarry in a cold church, the hyperæmia of the generally lax, uvular mucous membrane was increased; the over-distension of the vessels could no longer be so readily restored to an equilibrium, on account of the depending position and the weight of the uvula; a stasis took place; and it only required a mechanical momentum to bring on rupture of the engorged vessels in the distended mucous membrane, and to induce an *apoplexy*. We need not suppose that the soup was too hot, or that a pointed, sharp-cornered, or any other body, was swallowed: the simple momentum of deglutition itself, perhaps of a large spoonful, which was swallowed somewhat hastily on account of a long fast, was amply sufficient, through the pressure occasioned thereby upon the over-

distended uvula, to induce rupture of the vessels, and consequently infiltration of blood—*apoplexy*.—*Deutsche Klinik*, Jan. 1854.

Treatment of Psychical Disturbances in their First Stage. By Dr.
ERLENMEYER.

UPON the treatment of psychical disturbances at their commencement, often depends the whole course of the disease, and especially the final issue in recovery or hopeless idiocy. A very common method consists in making large abstractions of blood, which seem required by the frequently exalted temperature of the head, the accelerated circulation in the cranial arteries, and the over-distension of the veins; in a word, the cerebral congestion, as it is usually expressed. Although the experience of all countries declares this treatment inappropriate, in most cases even positively injurious—although the testimony of all our hospitals for the insane is opposed to it; yet numerous cases still occur in which patients are brought, with rapid strides, to incurable idiocy, by means of copious blood-lettings.

The time is not long gone by, when, in our best insane hospitals, the use of narcotics, in the treatment of psychical diseases, was wholly interdicted. This view was first changed by the recommendation of opium by Dr. Herman Engelken; and this remedy now began occasionally to be tried, and, indeed, in somewhat larger doses than usual. The excellent results which followed this practice, in certain cases, continually encouraged to further trials; so that now it is considered indispensable by our best physicians.

The form of psychical disturbance in which opium succeeds best, is melancholy, in its various shades. It animates the patient, exalts innervation, and gives to the despairing sufferer new courage. I have tested this remedy in private practice. With few exceptions, mental disturbances, in their first stage, accost us as a melancholic temper, so that these cases also appear appropriate for the administration of opium. Upon different occasions, when I have been called to the treatment of commencing mental disturbance, I have, therefore, decided upon the exhibition of opium, and have seen really surprising results from it, since many patients have not only been temporarily improved thereby, but for the most part have been completely cured.

Opium administered in large doses, operates, in many respects, entirely different from small doses. It produces no congestion of the brain; it does not induce constipation—on the contrary, I have, in several cases, observed severe diarrhoea following the use of this remedy, which required its discontinuance. I have, in all cases in which constipation followed the exhibition of small doses at the commencement, seen this disappear upon its continued and increased administration. The nutrition of the patient is very quickly increased, and I have repeatedly seen the weight of the body gain from two to three pounds a week. The courage of the patient, which, in melancholy, is so depressed, becomes exalted; the constant complaints and lamentations are silenced; in short, the patient, in a brief time, is both corporeally and mentally changed.

In the hospitals, the exhibition of opium has been carried to six grains

at a dose; and several physicians, especially those who first commended the practice, have carried it still farther, without observing any injurious effects. At the commencement of psychical disturbances, such doses, though they may be well borne, are not at once necessary; and the exhibition of from two to four grains twice a day will suffice completely to allay incipient melancholy.

The best form of opium is the powder, as such, or made into pills; whilst the tinctures and alkaloids have not been so efficient in my hands.

Whilst I now proceed to the indications and contra-indications, I should observe, in the first place, that the data brought forward are imperfect; and that I here mostly appeal to symptoms, will be excused by the reader, who knows full well that the diagnosis of the condition lying at the basis of mental maladies is infinitely difficult.

The highest indication for the exhibition of opium is the hyperæsthesia, which presents itself at the commencement of psychical disturbances in so manifold a manner. It matters not whether this hyperæsthesia be of peripheric or central origin; nor is it of any consequence in which division of nerves it occurs. The excellent effect of opium in pure neuralgias, should have long since led to its administration in hyperæsthesia of other nerves; and would certainly have done so, had not various fears, which were based more upon theory than practice, deterred therefrom. That opium is not so dangerous a remedy as it is generally represented in the manuals of *Materia Medica*, I have thoroughly convinced myself; and many of our German physicians, at the head of insane hospitals, will agree with me, whose authority must be acknowledged by every one.

Almost two-thirds of all psychical maladies commence as hyperæsthesiæ. One of the most common is the hyperæsthesia of the *Nervus Vagus*, with greater or less participation of the sympathetic, in the well-known form of præcordial distress, which Fleming has so well described, and which, together with headache, he enumerates as the most constant symptoms of psychical disturbances. I have observed the præcordial distress in very different constitutions, as well of central as of peripheric origin, and always perceived good effects from opium.

The result is surprising when this præcordial distress is connected with psychical hyperæsthesia, a condition which is usually designated as *hypochondriacal melancholy*. These patients are fearful tormenting spirits to the physician, because they cannot be dissuaded from their hypochondriacal ideas by any process of reasoning.

A more numerous class of hyperæsthesiæ, which occur mostly at the commencement of psychical diseases, are the sensual. It is wonderful to what perversities patients are often led by this kind of alienation of the nerves of sense. A great part of the aversion to food occurring at the beginning of mental maladies, depends upon the hyperæsthesia of the glosso-pharyngeal or olfactory nerve. In food prepared in the ordinary manner, the patients smell and taste all possible singularities; when there is also simultaneously hyperæsthesia of other nerves, often of the vagus, they are sorrowful, anxious, distrustful, smell poison in their food, which increases and justifies their anxiety, and they begin to resist nourishment. Another complaint which we frequently meet with in patients of this kind, is that those about them know their thoughts. I have found this in many cases, where there was as yet no particular mental derangement; it is evidently a

minor degree of hallucination of hearing, induced by hyperæsthesia of the acoustic nerve. Such a condition very commonly precedes the outbreak of peculiar hallucinations, as I have repeatedly observed in a patient who suffers periodically from hallucinations of hearing. A short time before the particular hallucinations, he has the sensation as if his thoughts were expressed by those about him, only that he does not clearly hear the particular words, as is the case upon the full development of the hallucination.

Most of the conditions which occur at the beginning of mental diseases, may be referred to these hyperæsthesiæ, which are usually designated by all sorts of other names,—*nervous irritability, exalted nervousity, nervous derangement, &c.*

When these hyperæsthesiæ exist in the manner just described, independent of any organic disease of the brain, manifested by anæsthesia, paralysis, &c., without the existence of any more serious affections of other important organs, of the heart, the lungs, the digestive apparatus, &c., which must be looked upon as the cause of the incipient mental disturbance, opium will do excellent service, and if it does not completely and permanently cure, it still effects an important alleviation; but in the last-mentioned cases it does no good, and often may do harm.

There is also another contra-indication, which is not, however, very frequently in the way; it is vomiting occurring after the administration of small doses. We need not be much disturbed, nevertheless, on this account, since no greater disadvantage is to be feared than that opium will do no good. I must especially insist, that a coated tongue and other gastric symptoms should not deter us from the use of opium, since this is observed in almost all cases of psychical disease, immediately at the opening of the scene, and very commonly occurring as the first expression of alienated nervous function. Opium allays these so-called gastric symptoms generally very quickly, enlivens the appetite, and stimulates nutrition better than all stomachics. There are individuals in whom there exists an idiosyncrasy against the smallest doses of this remedy, who become thereby more excited, in whom a new train of symptoms is induced, as palpitation of the heart, ringing in the ears, greater disquiet, complete sleeplessness; in these persons we should desist at once from the farther use of opium.

Opium does excellent service, not only in melancholy, but in all other forms of psychical alteration which depend upon hyperæsthesia, if it is employed in the first stage of the difficulty, whilst in all psychoses of a *torpid character*, it produces little or no benefit.—*Deutsche Klinik, Januar., 1854.*

MATERIA MEDICA, PHARMACY, AND THERAPEUTICS.

Effects of Belladonna in Poisoning by Opium.

WE have received from Thomas Anderson, M. D., Curator of the Museum of the Botanical Society in Edinburgh, a paper with the above title. It is of so suggestive and practical a character that we at once insert it, and desire to call to it the especial attention of our readers.

Last winter I was engaged in a series of experiments on the therapeutic actions of the *Atropa Belladonna*. In the course of my researches, my attention was more particularly directed to the state of the pupil and nervous

system resulting from its internal administration. I also pursued my investigations on this subject in connection with a remark of Dr. Graves, in his clinical lectures, somewhat to this effect, that in continued fever with contracted pupils and coma, we are perhaps entitled to suppose that, if we can, by an agent administered internally, so affect the brain that the pupils shall become dilated, the other symptoms of cerebral derangement will also be removed.

Acting on this theory, I gave belladonna to several patients laboring under the ordinary continued fever of this city (Edinburgh), with coma and contracted pupils, and in a large number with favorable results. The idea then occurred to me, that, perhaps, belladonna would likewise be found beneficial in relieving the coma with contracted pupils, occasioned by poisoning with opium. However, I then dismissed the notion from my mind as absurd, and as I soon became otherwise occupied, I forgot it.

It again recurred to me in November, when using belladonna externally; and I determined to test it by experiment as soon as a case of opium-poisoning should occur. This I was soon enabled to do, as a patient of whom I had charge, and laboring under delirium tremens, having received an overdose of the solution of the muriate of morphia, became comatose. He had taken in thirty-six hours two ounces of the solution of the muriate of morphia, and it had been continued by the attendant after sleep was procured. When I saw him he was in profound coma, his breathing was stertorous, amounting to no more than four or five per minute, and his pupils were contracted to mere points. His pulse was excessively weak, and rather slow; it was quite impossible to rouse him. I ordered him immediately the following mixture: Tincture of belladonna, six drachms, in five and a half ounces of water, of which an ounce was to be given every half hour. Three ounces of the mixture were administered with great caution, after which his pupils began to dilate. The six drachms of the tincture of belladonna were taken, and in four and a half hours after the first dose of it was given, the patient was in the following condition: The coma was entirely gone, respirations were between twenty-two and twenty-five per minute, the pupils were much dilated, the pulse had risen to nearly one hundred and twenty in the minute, and was also increased in strength. His countenance also, from being cold and pallid, had become much flushed, and the whole body was much warmer.

He replied readily and coherently to all my questions.

He continued to improve for three days after; when, rising suddenly to stool, he fainted, and before the assistance of the nurse could be procured, he was dead.

A fortnight afterwards, I had another opportunity of testing my views. A woman, about fifty years of age, took, at 4 o'clock, P. M., two drachms of laudanum, and at half past 5, P. M., three drachms more. She was brought to the infirmary at 8 o'clock, P. M. After making vain attempts to rouse her from the coma, by walking her about, &c., the stomach-pump was used at a quarter past 8 o'clock. By this means her stomach was thoroughly evacuated, but no trace of opium was detected by smell or sight. It had probably been all absorbed. A current of electricity was then applied to her hands for nearly ten minutes, but without rousing her. I saw her at a quarter to 9, P. M., for the first time; and on being told that she

had been poisoned by laudanum, I determined to try the effects of belladonna.

At that time her pupils were contracted to mere points, her respiration was stertorous—ten per minute—the pulse was feeble, and the extremities rather cold. Between 9 and half-past 9, I gave her one ounce of tincture of belladonna in three ounces of water, which was all swallowed, but with difficulty. In the course of the next half-hour, two drachms more were administered. At 11, P. M., the first alteration in the size of the pupil was observed; the respirations had also then increased to twelve or thirteen in the minute, and the pulse was much stronger. The symptoms continued to improve till 2, A. M., when all indications of opium poisoning had disappeared. The woman was then sitting up in bed, talking to the nurses, with pupils dilated to a little more than their natural size, and still slightly sensible to light. The extremities were quite warm, the pulse was about 100, and of good strength.

She gave me a coherent account of her motives for taking the poison, of the amount of money she had spent in purchasing the laudanum, and the names of the druggists where it had been procured. She also replied sensibly to questions about her family, and the age and occupations of her children. She continued awake till nearly 4 o'clock, A. M., after which she slept till 9, A. M. In the morning I found her pretty well, her pupils being no more dilated than they were four hours after the first administration of the belladonna. She complained, however, of nausea, but unaccompanied with vomiting. This symptom, along with the dilated pupils, had entirely disappeared in the course of two days. She was kept in the hospital, under observation, for ten days after the accident; at the end of which time she was dismissed, perfectly well. The tincture of belladonna used in both these cases, was of the strength of four ounces of the leaves to two pints of rectified spirit, and prepared by percolation. Half a drachm is considered a full dose. I have seen dilatation of the pupil produced by a drachm given at once.

So much, at present, for the action of belladonna on persons under the influence of opium, I will now very briefly notice some observations on the simultaneous administration of opium and belladonna, or its congener, hyoscyamus.

My attention was accidentally directed to this subject some weeks ago, from a circumstance that happened to one of my patients. A man laboring under phthisis, and unable to rest at night from the violence of his cough, had the following mixture prescribed for him, as a soporific draught:

Sol. mor. mur.—one drachm.
Tinct. hyoscyami—two drachms.
Aqua cassiæ—three ounces.

He took half of this draught at 11, P. M., but without obtaining any sleep; and before the morning the whole of it was given, but still with no effect. For two nights more the same dose was repeated, but with no better result than at first. At last, I determined to try the effect of morphia alone; and accordingly I ordered a draught of thirty-five drops of the solution of the muriate of morphia, diluted with cassia water. After this he slept soundly, and therefore the same amount of morphia was continued for several nights, with the same result—sound sleep.

I mentioned this case to several of my friends, and two or three of them remembered similar cases which they had met with; but the sleeplessness following the simultaneous use of the medicines had been ascribed to some peculiarity in the constitution of the patient, and not to the opposite actions of the drugs upon the nervous system.

In the "Association Medical Journal" of the last week of November, 1853, I saw the following interesting case bearing on this subject; it is an abstract from the American Journal of Medical Science: "A child, nine years old, swallowed two suppositories, each containing two grains of opium and two grains of extract of belladonna. It went to sleep not long after. The mother awoke it at the end of four hours with great difficulty, when very free vomiting ensued, producing great exhaustion. The drugs were taken at noon, and at 7, P. M., the child seemed only a little fatigued and sleepy. It had eaten dinner immediately before swallowing the poison; and Dr. Coale (who relates the case) suggests that this may have retarded absorption."

Notwithstanding the very interesting, and, to me, almost conclusive nature of these experiments, I am not prepared, nor do I wish, to say that I have discovered an antidote for poisoning by opium. In such cases, however, I believe that belladonna or hyoscyamus will be serviceable, on this supposition, that, if we give an agent whose action on the brain is opposite to that of opium, as soon as its minor physiological effects are developed, the evidences of the action of the opium will disappear. It seems to me that these properties exist most markedly among the members of the natural family *Atropaceæ*. (See a paper on the *Solanaceæ*, by Mr. J. Miers, in the "Annals of Natural History" for March, 1849. Also an abstract of a paper by myself on the *Solanaceæ* in the "Annals" for June, 1853, and the "Phytologist" for May, 1853.)

Many plants of this order, such as species of *Atropa*, *Hyoscyamus*, and *Datura*, act as exaltants of the nervous system, increasing the rapidity of the respiration, and the strength and frequency of the pulse, causing delirium of various grades of violence, accompanied till death with dilated pupil, and terminating in coma, probably merely the result of exhaustion of the powers of the system. Now, these are effects quite the opposite of those observed daily as the consequences of the administration of opium. That drug exerts its poisonous influence as a depressant of the vital powers, diminishing the number of respirations, weakening the heart's action, and causing coma, as one of the first alarming evidences of its effects.

When talking lately to Dr. Garrod of my views of the treatment of poisoning by opium by belladonna, he told me, that in his opening lecture, delivered last October, in the University College, London, he had stated the converse of my idea, viz.: from the resemblance of the poisonous action of belladonna to delirium tremens, in which disease opium is a most approved remedy, it is probable that, in poisoning by belladonna, opium may be found advantageous.

In conclusion, I will offer a few practical hints to any who may be inclined to test my views experimentally. That, taking the pupil as the index of the state of the brain, it is desirable to produce slight dilatation as speedily as possible.

Now, in order to overcome the opposite effects of the opium, it is necessary to give doses three or four times greater than what would produce dila-

tation in a healthy adult. The first two cases that I have cited, prove that no one need fear that their patients will thus be doubly poisoned. The tincture made from the leaves is the most uniform preparation. Four or six drachms of it might be given at first, and if that amount does not succeed in dilating the pupils in the course of an hour, the dose may be repeated. The careful application of a plaster of equal parts of the extract and lard to a blistered surface might be useful. Lastly, the internal use of small doses of atropine, as, for example, one-fourth, or even one-half of a grain in solution, will rapidly remove the contraction of the pupils.

Poisoning by Aconite.—Two recent cases of poisoning by aconite are recorded in the foreign journals, each illustrating the danger of entrusting such remedies to the care of ignorant persons.

The first case occurred near Bristol, England, the victim being the inmate of a convent in that vicinity. She was undergoing treatment for tape-worm, and was ordered by the medical attendant a decoction of pomegranate bark and quinia. The sister-assistant administered, by mistake, one drachm of Fleming's Tincture of Aconite and Morphine, which had been prepared as an external application for toothache. The result was, the death of the girl in five hours.

The other occurred at Glasgow, the patient (a Mr. Brown) dying in four hours after the administration of the fatal dose. It appears he applied to a young friend, a medical student, for a prescription (as he was attending in one of the first drug stores of the city.) The young man prepared for him a dose of twenty-five drops of tinc. of aconite, having seen a like quantity prescribed in some French work; whereas, the British tincture being much stronger, the usual dose is from five to eight drops.—(Condensed from *Lond. Lancet, Med. Times, &c.*)

A correspondent of the *Pharmaceutical Journal* calls the attention of its readers, not only to the danger attending the several formulæ for the tincture of aconite, but also that arising from the conflicting opinions with regard to the dose of the British preparation. One contends the dose is from one to five drops, and that eight drops have been known to produce alarming effects. But Mr. Squire gives the dose as from seven to ten minims; Mr. J. Denham Smith, in his translation of the *Pharmacopœia*, in one place, from two to ten minims,—in others, from one to six minims; whilst Dr. Nevins actually states it to be from three to fifteen minims, "or even more."

We consider the only prudent course in prescribing such potent remedies, is to commence with the minimum dose, and gradually increase it.

PART IV.—HOSPITAL RECORDS.

HISTORY OF THE NEW YORK HOSPITAL.

(Continued from page 144.)

THE location of the Hospital is perhaps not the best which could have been selected, had it been constructed with reference to the present extent and requirements of the city; still, its situation is not by any means so inconvenient as has been sometimes represented and objected. It is within a short distance from the termini of the various city railroads, readily accessible to a large portion of the residences of the laboring poor, who are likely to seek for admission to its wards; and not very distant from the principal shipping wharves, from whence the casualties of seamen, stevedores, and others employed in the service of the mercantile marine of the city, are brought. On the north side of the leading thoroughfare, Broadway, opposite to the termination of Pearl Street, which communicates with the whole extent of the business portion of the East River, and lying between two streets which extend to the North River, the avenues of access are sufficiently numerous and conspicuous. It is a striking object to the stranger, from the neat and well-kept plots which lie before its principal doorway and skirt on Broadway. The iron railing and gateways are substantial, but not elegant; and its gray, granite front, clothed here and there with ivy, give it a sombre and venerable look, which contrasts strongly with the glitter of the gay shops on either side of the street. There is also a quiet look about it, when viewed from the midst of the bustle and noise around, most suggestive of its uses. The style of architecture is sternly simple—Doric it has been called; whether this term is strictly applicable or not, scientifically, we do not profess to determine; it is at least sufficiently expressive for that style which permits of little, or we should rather say, in this instance, no ornamentation. Everything around, without and within, is neat, tidy, and clean. The beds are most convenient and comfortable, and, in those intended for surgical cases, amply provided with such mechanical contrivances as are essential to the maintenance of proper position and due convenience of both patient and attendants. In some of the wards the beds are rather closely packed, a defect only to be remedied by the provision of more extended accommodation. We are not aware, however, that this crowding exists to such an extent as to promote the generation of a greater amount of epidemic disease, or, of that which does exist, a more aggravated type, than is common to all hospitals. Erysipelas would appear to be the principal malady of this character which may be regarded as indigenous to the surgical department; its visitations are capricious, and

its character variable. Typhus would seem to obey the same laws, as to season and other circumstances, which obtain in Europe.

The elevation of the building may in a great measure account for this comparative immunity, it being considerably above the level of the surrounding streets; and doubtless the improved and efficient system of ventilation and the rigidly observed hygienic rules contribute much to the same end.

The affairs of the Hospital are under the management of twenty-six Governors, elected annually from among the members of the Society. The latter are composed of the Mayor, Recorder, Aldermen and Assistants of the city; the rector of Trinity Church, the President of Columbia College, and the senior minister of the several religious denominations, as well as several other individuals originally nominated in the Charter, and such other persons as shall be chosen from time to time by a quorum of the Governors.

The Board of Governors choose from among themselves a President, a Vice President, a Treasurer, and a Secretary. The Governors and officers are severally required to take an oath or affirmation for the faithful performance of their duties. The Board regulates its own proceedings, determines the duties of their executive officers and other officials, the admission of patients, and controls the Library and Museum by a code of By-laws enacted by themselves. They also appoint two Committees:

1st. *A Visiting Committee*, consisting of three members, who meet twice a week at the Hospital, for the admission of patients. No patient is admitted without having been previously examined by one of the physicians or surgeons, house-physician or house-surgeon. They determine upon the amount to be paid as alimony in the case of pay patients, and see to the security of its payment. They receive and inquire into all complaints, from every source, and adjudicate upon the same; having the power to discharge patients and menials, and to suspend the house-surgeons and physicians, the apothecary, and their assistants, reporting the same to the monthly meeting of the Governors. They take charge of the property of the Hospital, and in every respect control and regulate the internal management of the Institution.

2d. *An Inspecting Committee*, consisting of two members, who visit the Hospital at least once a week, and inquire whether the by-laws and regulations relative to the management and economy of the house are duly observed and carried out; particularly examining the condition of the wards, the conduct of the officers, servants, and nurses.

The President and Vice President are also required to visit the house once a month, and report to the monthly meeting. The services of the President, Vice President, and Committees, are rendered gratuitously.

The Board of Governors appoint four Physicians and six Surgeons; one House-Physician and two assistants, and two House-Surgeons and two assistants; an Apothecary; a Superintendent, or Steward, and assistant; a Matron; a Clerk, and an Orderly.

Not in the charter empowering the Governors to make these appointments, nor in their own code of by-laws declaring the duties and privileges of the Consulting and Attendant Physicians and Surgeons, have we been able to trace one word explanatory of the mode by which these appointments are made, or the qualifications necessary for the post. All that we find on the record is, that they may, "by the majority of their own voices, from time to time, elect, nominate and appoint such and so many physicians and surgeons as they shall judge necessary,"* and that these "are selected from the most eminent of the profession, and are annually appointed by the Governors."† Yet for the residential medical officers and their assistants, the qualifications are very fully stated, as well as the source from which the principal recommendations shall come, namely, *three* of the attendant medical officers.

We do not mean to assert that there has really been any abuse of this peculiar prerogative of the Board, or to insinuate that the present staff are exceptionable; although we will frankly admit that some of the more recent appointments do not appear to us to have been made wisely as regards the claims of many older and at least equally eminent practitioners in the city.

It is a mode of proceeding, in reference to these appointments, not consonant with true republican principles; nay more, it is not even in accordance with the practice of the most liberal of the institutions of the old world. There, the selections are made by a fair and timely notice of the occurrence of a vacancy in the staff; a brisk and general canvass of members of the particular charity or institution, where the appointment is vested in them, and who all meet for the purpose of giving, as far as they can do so, a representative, popular expression of confidence in the professional standing, reputation, and merits of the respective candidates. Or, in those instances where there is the nearest approach to the close-borough monopoly system, the election is made by the medical staff themselves, who are supposed to be the best judges of the professional qualifications of the person to be appointed.

Here, on the contrary, all that the public at large, the members of the corporation itself, and the medical profession (except the favored few who seem to exist everywhere, and generally to be an equally exclusive body),

* See Charter of Incorporation, page 11.

† See "Account of the New-York Hospital," previously quoted, page 75.

know of any change in the number or persons of the attendant physicians and surgeons, is the announcement of the *fait accompli*, in the newspaper or the annual report of the Board.

It is to be hoped that this defect in the otherwise admirable arrangements for the government of this ancient and useful institution, will in time be remedied, so as to lay the appointments of physician and surgeon open to the competition of the whole profession, and election by the general body of the members of the corporation. And this might be effected by such a modification of the by-laws of the institution, or, should it be necessary, such an alteration in the charter by the Legislature, as to secure due public notice of the time and manner of the annual election of these officers, and their requisite qualifications. At present, it is virtually a nomination of some previously selected individual known only to the appointing Board.

It is an appointment for which all men who possess any love for and zeal in their profession, and who seek to obtain an honorable distinction for skill and experience, are naturally ambitious. It always confers upon the fortunate holder a certain prestige in the community among whom he may reside and practice, and enables him to earn for himself, among his professional brethren throughout the world, an enviable fame and reputation, by promulgating with the authority of his position, his peculiar views on the nature of disease and the results of his individual methods of treatment and observation.

Such a course would tend to inspire confidence in the institution, by the assurance which the beneficiaries would have, that their contributions to the relief of their suffering fellow-creatures were sustained by the exercise of that professional skill and knowledge deemed to be the most efficient by a majority of themselves. And, as the largest contributors to the support of the institution, through the grant of the General Legislature, the people of the State would participate in this assurance: as their almoners, it is due to the Legislature that such a popular and liberal mode of election should exist and be enforced.

The difficulty of procuring a sufficient number of experienced and efficient nurses obtains everywhere. The repugnance or prejudice which exists in the minds of those who usually fill such situations, to the confinement and duties, and against the nature of the employment, as well as the natural apprehension of the risk attending it, are such as to prevent many from engaging in it, except under the inducement of a high rate of remuneration. It would be better, in all cases, to push this to the utmost extreme consistent with the due economy necessary in all eleemosynary institutions, rather than that the poor sufferer should be at the mercy of an ignorant or indifferent nurse. Such observation as a casual visiter can make, would lead to the conviction that there is generally a deficiency in the

number of the nurses in the wards. All that vigilance on the part of the residential medical attendants and their assistants can effect, seems to be fully accomplished; but there would certainly appear to be some want of efficient attendance in the more menial offices, which can alone be properly performed by a nurse.

No patients laboring under *incurable* diseases are admitted, being regarded as fitter objects for the Alms-house. Infectious and contagious diseases are also declined.

An examination of the yearly returns of classified disease, treated in the institution, show a large preponderance of surgical cases, and particularly those arising from mechanical violence. Thus, if we take the aggregate of three years—say 1848, 50, and 52, as stated in the annual summary tables of those years—we find them to be as follows:

		<i>Cured.</i>	<i>Died.</i>	<i>Discharged.</i>	<i>Remaining.</i>
Contusions,	495	431	12	29	23
Dislocations,	41	32	—	8	1
Fractures,	1210	854	163	81	112
Gunshot,	54	44	6	4	—
Injuries,	393	236	74	34	49
Wounds,	453	377	25	33	18
Stabs (2 years),	30	22	6	1	1
	<u>2,676</u>	<u>1,996</u>	<u>286</u>	<u>190</u>	<u>204</u>

If we take the aggregate number of admissions for these three years, we find it to be 10,752; it follows, therefore, that of the whole number of cases of all descriptions of disease, admitted to the medical and surgical wards, rather more than *one fourth* are surgical lesions resulting from external violence. And if, in this estimate, we embrace the cases of poisoning, drowning, and coup de soleil, the relative proportion will be considerably increased.

By the above statement, it appears that in the whole number of these cases, the ratio of mortality is something under 11 per cent.; if we exclude from the calculation those cases discharged, from various causes, it will be about $11\frac{1}{2}$.

We have selected these years for the basis of our examination, in order to confine the extent of the investigation within the limits of our space; and it appeared to us that by taking the alternate years of the last six, previous to 1853, the annual report of which is not yet published, we should select a very fair average.

Next in importance, numerically, we find the class of Fevers, which are thus arranged:

		<i>Cured.</i>	<i>Died.</i>	<i>Discharged.</i>	<i>Remaining.</i>
Febris (?),	687	608	29	15	34
Intermittens,	457	335	1	10	11
Remittens,	483	413	40	11	19
Typhus,	704	536	141	13	14
	<u>2,331</u>	<u>1,892</u>	<u>211</u>	<u>49</u>	<u>78</u>

Here the ratio of mortality in the gross number of cases, excluding the discharges, is a small fraction over $4\frac{1}{4}$ per cent.; in Febris (by this term is meant, we presume, continued fevers), $6\frac{1}{4}$; Intermittens, remarkably low; Remittens, not quite 1; Typhus, $17\frac{3}{4}$.

The remaining portion of the surgical cases are thus given :

		<i>Cured.</i>	<i>Died.</i>	<i>Discharged.</i>	<i>Remaining.</i>
Abscessus,	182	126	19	24	13
Aneurismus,	10	—	6	4	—
Calculus,	2	—	1	1	—
Carcinoma,	23	8	6	8	1
Disease of Bone,	62	36	6	16	3
“ Eye,	175	115	—	37	23
“ Joints,	47	23	—	18	6
“ Ur. Organs,	389	260	13	74	42
Erysipelas,	191	137	41	3	10
Fistula in Ano,	28	12	1	8	7
“ Perineo,	1	—	—	1	—
“ (Vesico-vaginal), . . .	2	—	—	2	—
Fungus Hæmatodes, . . .	3	2	—	1	—
Furunculus,	4	4	—	—	—
Gangrena,	22	5	14	—	3
Gonorrhæa,	54	36	—	14	4
Hæmorrhoides,	28	11	1	10	6
Hernia,	21	10	6	1	2
Inflammatiô,	114	87	9	11	7
Morbus Coxarius,	1	—	1	—	—
Paronychia,	38	27	—	6	5
Syphilis,	950	686	13	133	92
Synovitis,	26	18	—	5	3
Tumor,	28	8	1	9	8
Ulcus,	356	256	2	57	41
Ustio,	179	102	31	18	13
Varix,	5	4	—	1	—

In this table we are struck with the small proportion of calculous disease. We shall, at a subsequent time, examine all the reports in detail, to ascertain whether this is a constant feature. Hernia does not appear, in this average, to be as frequent as it is found in European Hospitals: the ratio of mortality is something over 33 per cent.

The proportion of disease of the urino-genital organs is so large as almost to justify the establishment of a separate institution for their reception. The total number of the various kinds amounts to 1,424, or a yearly average of 430 cases—a nice little number for a glorious clinique, *à la Ricord*. The ratio of mortality is low, $17\frac{1}{8}$.

Ulcers form a large item, and the results are highly satisfactory. We have classed inflammations under the surgical cases, as we presume them to refer to external affections, the various internal inflammatory diseases having been classified by their proper generic terms: it would have been, perhaps, more satisfactory to have designated the tissues involved. In Erysipelas, the ratio of mortality seems high, being nearly 22 per cent.

Next in order, numerically, are diseases of the eye; and the table shows favorably for successful treatment.

Our space will not permit us to give the residue of the medical cases so much in detail, but we make the following important abstract of the principal diseases remaining on the tables :

		<i>Cured.</i>	<i>Died.</i>	<i>Discharged.</i>	<i>Remaining.</i>
Bronchitis,	129	88	4	11	26
Cephalalgia,	34	24	—	6	4
Constipatio,	61	46	—	7	8
Cutanei,	74	43	—	19	2
Debilitas (?),	87	59	10	13	5
Delirium Tremens,	199	151	31	7	12
Diarrhœa,	189	127	34	22	6
Disease of Brain (?),	58	28	16	14	—
“ Heart (?),	34	—	11	18	5
Dysenteria,	228	131	63	23	11
Emphysema,	8	5	1	2	—
Enteritis,	12	9	2	1	—
Hemiplegia,	17	2	5	9	1
Hydrops (?),	30	10	12	7	1
Laryngitis,	21	15	1	4	1
Neuralgia,	37	17	—	18	2
Paralysis,	26	10	2	11	3
Peritonitis,	21	8	12	1	—
Purpura,	4	1	2	1	—
Phthisis,	161	—	61	69	11
Pneumonia,	207	135	48	10	14
Pleuritis,	35	26	2	5	2
Rheumatismus,	587	463	1	65	63

The first topic which suggests itself for remark, in the consideration of this portion of these tables, is the indefinite character of some of the terms employed in the classification : to these we have taken the liberty of affixing points of interrogation. What, we would ask, is to be understood by the exceedingly general term, Debilitas ? Are we to conceive as implied, anæmatrophia, climacteric decay, marasmus, inappetence, or the result of previously existing disease ? Disease of the brain !—phrenitis, ramollissement, tubercle, anæmia, hernia, or what else ?

Disease of the heart !—carditis, fatty degeneration, ossification of the valves, hypertrophia, ectopia, or rupture ? Hydrops !—hydrocephalus, hydrathorax, ascites, or anasarca ?

It may be objected to this criticism, that to specify each form of the disease would extend the tables to an inconvenient degree. But while accuracy is the essential element in all statistical records, especially in those of a purely scientific character, we submit that an additional page or two ought not to be an obstacle worthy of consideration. It ought not to be forgotten that, although the annual report is addressed principally to the Legislature and lay members of the corporation, yet it is the only available record to a very large majority of the profession, of the result of the practice and the frequency of disease as it occurs in the wards of the Hospital ; and there are many who use such publications with great advantage in the prosecution of their professional studies,

The exhibit of diarrhœa, dysentery, and rheumatism, here made, is of much interest and importance.

But we must unwillingly curtail our remarks.

The whole number of cases admitted, from the 1st of February, 1792, to the 31st of December, 1853, 99,930. There have been discharged as cured 70,235; as relieved, 5,890; by request, 5,741; as improper objects, 1,429; as disorderly, and having eloped, 2,994; died, 9,824: gross of 1853, 3,827. In this calculation is included 1,553 who were lunatics, and were received previous to the separate establishment of Bloomingdale Asylum. Of these, 704 were discharged cured; 239 as relieved; 278 by request; 61 improper objects; 65 disorderly; 154 died; and 52 transferred to Bloomingdale.

Some idea may be formed of the scale upon which the Institution is conducted, from the circumstance that the average yearly expense of the three years we have been considering, amounts to \$63,650.

There are several other points of much interest, which we entertain a strong desire to display, but have not space for them at present; it may be that we shall recur to them at some convenient season.

Among the names of the members of the corporation, are to be found some of the most celebrated of those connected with the earlier history of the city, whose sons are yet among us, adding their quota to the success of this institution, and the general prosperity of the community.

The following compose the present Board of Direction, Medical Staff, and subsidiary officers:

GOVERNORS.—George Newbold, Esq., *President*; George T. Trimble, Esq., *Vice President*; John Adams, Esq., *Treasurer*; Robert L. Murray, Esq., *Secretary*; and Najah Taylor, Benj. W. Rogers, Gulian C. Verplanck, Benj. L. Swan, James F. Depeyster, John A. Stevens, R. M. Lawrence, Augustus Fleming, J. Shelden, James I. Jones, William M. Halsted, John L. Buckley, I. Donaldson, Stacy B. Collins, Augustin Averill, George F. Hussey, J. W. Beekman, Edwin D. Morgan, Caleb Swan, Russel H. Stevens, Esquires.

PHYSICIANS.—*Consulting*, Thomas Cock, Francis U. Johnson. *Attending*, Joseph M. Smith, John A. Swett, John H. Griscom, Henry D. Bulkley. *House*, H. S. Swift.

SURGEONS.—*Consulting*, Valentine Mott, Alexr. H. Stevens, R. K. Hoffman, Alfred C. Post. *Attending*, John C. Cheeseman, Gurdon Buck, John Watson, Thaddeus M. Halsted, Thomas M. Markoe, W. H. Van Buren. *House*, C. Agnew, J. C. McComb.

Librarian, J. L. Vandervoort; *Curator*, C. M. Allin; *Chaplain*, Rev. W. C. Hawley; *Superintendent*, John L. Roome; *Assistant*, F. B. Ketcham; *Apothecary*, J. B. Sabine; *Clerk*, Robert Roberts.

PART V.—EDITORIAL AND MISCELLANEOUS.

NEWS OF THE BILL.—By a private letter from Albany, we are assured that the Anatomy Bill will undoubtedly pass, and will come up probably this day (March 1st) for final consideration. There does not appear to be any organized opposition to it; that which exists being principally in the way of making political capital out of the prejudices of those who are opposed to it.

MEDICAL SOCIETY OF THE STATE OF NEW YORK.—The Forty-seventh Annual Meeting of this Society convened in the Common Council Chamber at 11 o'clock, Tuesday morning, February 7th, 1854. The Society was called to order by the President, Dr. Jenks S. Sprague. The permanent members and delegates enrolled their names and took their seats. The Secretary, Dr. James H. Armsby, read the minutes of the last annual meeting. The Society numbers one hundred and twenty-eight delegates, and over a hundred permanent members. The President, Dr. Sprague, delivered an interesting address, which, we regret to say, our limits do not permit us to insert.

Dr. Peter Van Buren offered the following :

Resolved, That so much of the President's inaugural address as refers to the appointment of committees to present annual reports on subjects of interest to this Society, be referred to a committee of five, to report on the best plan to be pursued.

Drs. Hyde, Burwell, Barker, Shipman, and Jacobs were accordingly appointed that committee.

Dr. Hun then invited the members of the Society to his house on Tuesday evening. Dr. Armsby extended an invitation for Wednesday evening. Both of these invitations were accepted.

Dr. Cogswell presented a list of the officers of the Albany County Medical Society.

Dr. M. F. Cash offered a preamble and resolution relative to the Society and the profession taking measures to guard against the pernicious influences of quackery upon the public health. The paper was laid upon the table.

Dr. Cash then read a paper upon "Rational medicine, or the regular practice as it is." The paper was referred to the Committee of Publications.

Dr. Benedict called up the subject of diphtheritic croup, laid upon the table from last year. Dr. B. spoke of alum as being a remedy for this disease. He had used it frequently, during the last five years, in form of a saturated solution, a teaspoonful given frequently, until free vomiting was produced, and in no case without good success. He spoke of the *true* form of the disease, and not of the spasmodic form which is so frequently met with. Dr. Rockwell said he could never perceive any earthly benefit from the use of emetics. He had tried them in vain. The speediest and surest way of relieving the urgent symptoms, and producing a cure, is by mercurializing the patient by fumigations of cinnibar. If alum would really accomplish so much, he should surely avail himself of its use. Dr. Bay

related his experience in the treatment of croup for the last thirty years. He had found the best success by the use of large doses of calomel. Dr. Burwell said that he had been disappointed in the use of nitrate of silver in croup. He found the effect of its application did not last over an hour. He was in the habit of using sulphate of zinc with ipecac., as an emetic. He had no more faith in alum than in any other mild emetic.

Dr. W. H. H. Parkhurst presented a very remarkable and interesting specimen and report of a case of extra-uterine conception, of forty-six years standing. Dr. Taylor offered a resolution requesting that a drawing be made of the specimen presented by Dr. Parkhurst. Adjourned till 3 o'clock, P. M.

Afternoon Session, 3½ o'clock.—The minutes of the morning session were read and approved. The Censors of the Western District reported that they had examined two gentlemen of the city of Buffalo, and they recommend to the Society that upon both of them diplomas be conferred.

Dr. March read a paper on, 1st, "Penetrating Wounds of the Abdomen, and Puncturing Wounds of the Intestines;" and, 2d, "Penetrating Wounds of the Larynx and Trachea." The paper was referred to the committee of publication.

Dr. Shumway read a paper on the reduction of the dislocation of the hip joint without the application of force. He saw the process demonstrated by Dr. Nathan Smith in 1815 and 1816. It was by this process that he had reduced all cases that had come under his care during the time he had been in practice. The process was brought forward in a paper read before this Society in 1852. That paper, written by Dr. Reid, claimed for him the discovery of that process. It was no demerit to Dr. Reid that he discovered that such a dislocation could be reduced without force; but as Dr. Smith lectured on the subject so many years ago, he thought "honor should be rendered to whom honor is due." Dr. Phelps said that he saw Dr. Physic perform this operation in 1810; but it appeared to have been done by accident. Dr. Physic said to the gentlemen around him, that he believed it to be the first case ever reduced without force. Dr. Shumway said that Dr. Smith mentioned to his class the case of Dr. Physic. It was only to the fact that Dr. Reid claimed, or it was claimed for him, the originality of the process that he objected. The paper was referred to the committee of publication.

Dr. Cash called up his preamble and resolution relative to the "Suppression of Quackery." Dr. Bissell hoped the subject would not at present be discussed by the Society. It would have no tendency to remove the evil. Dr. Taylor followed, expressing similar sentiments. Dr. Monell said that he thought the evil would be best remedied by instructing the patients of the relations that should exist between the patient and physician. The subject was further discussed by Drs. Van Buren, Phelps, and Shumway.

The Society then adjourned to meet at seven o'clock, preparatory to listening to the annual address. At 7 o'clock the Society met in the Assembly Chamber, when the address was delivered by the President, Dr. Jenks S. Sprague, after which, Dr. Rockwell presented the following resolution, prefacing it with appropriate remarks:—

Resolved, That the thanks of this Society be presented to the President, for his very interesting and able address, and that a copy be requested for publication in the transactions of the Society.

The resolution was unanimously adopted. The Society then adjourned until 10 o'clock, A. M., Wednesday.

Second Day—Wednesday, Feb. 8.—The minutes of Tuesday's proceedings were read and accepted.

The resolutions of Dr. Cash were called up, and after some discussion were lost.

Dr. Shumway presented the following :—

Resolved, That this Society entirely approve of the Bill "to promote Medical Science," now pending in the House of Assembly, and respectfully but earnestly recommend its passage, as an act due to science and humanity, and as indispensable to the security of the grave.

The resolution was unanimously adopted.

Dr. Phelps presented a preamble and resolutions relative to the encouragement of Medical Associations. After a short discussion, the subject was indefinitely postponed.

Dr. A. Clarke made a statement of forty-five cases of croup, treated by Dr. Willard Parker, of New York.

The table prepared by Dr. Cock, from Dr. Parker's notes, gave the age, sex, treatment, result, &c., of these forty-five cases. Thirty-one of these cases proved fatal, sixteen recovered. These cases were diphtheritic croup. In twenty-five out of twenty-eight cases which Dr. Parker examined, the false membranes, or membranous effusions, were distinctly visible on the fauces. Dr. Parker has not noted whether he sought for this membrane in the other of the forty-five cases. Dr. Clarke gave definitely and minutely the treatment of these forty-five cases. They were variously treated—by calomel, antimony, ipecac., nitrate of silver, a mixture of lobelia and senega, hot water, alum, inhalation of the vapor of iodine, leeches, and blisters. He gave also the number of cases, and the result of the operation of tracheotomy, as performed by Drs. Parker, Post, Buck, Mott, Van Buren, Wood and Batchelor. He thought the result of tracheotomy was not such as to render it generally advisable. The majority of those that recovered were treated by calomel and ipecac.

The treatment of the unsuccessful cases were mostly related in detail. He gave also the history of the success of M. Trousseau's and Dr. Henry G. Smith's cases of tracheotomy.

Dr. C. further remarked that by Dr. Parker, the use of the water vapor and calomel was considered as most likely to prove efficient. This subject was discussed at length by Drs. Bay, Shipman, White, and Swett.

Dr. Clarke exhibited a specimen of a case where the false membrane had formed, and the operation of tracheotomy had been performed.

Dr. Taylor offered a resolution relative to the Comitia Minora addressing a circular to the several County Medical Societies in this State, urging the importance and advantages of keeping up their organizations; and that the said Comitia Minora be requested to obtain the opinion of the Attorney General relative to the obligation of physicians keeping up such organization under the existing law regulating the practice of physic and surgery. The resolution was adopted.

Dr. Sanders presented the following :

Resolved, That a committee of three be appointed to inquire into the circumstances under which the honorary degree of Doctor of Medicine was conferred upon a certain irregular practitioner, by Hobart Free College.

Dr. Sanders said, if the Faculty conferred the degree, knowing the character of the person to whom the resolution alluded, he felt strongly inclined to return his diploma to the college; for he was a graduate of that institution. Dr. Coventry said the degree was conferred without his knowledge. Dr. Spencer said, he was glad the gentleman felt such an interest in the institution, and was zealous for the dignity of the profession. He was no longer connected with the institution; but it was justice to himself and others to say, that the diplomas were changed some years ago, so that the Faculty did not now confer the degrees; but the Trustees of the institution could confer the degrees of M. D. and LL. D. upon whom they pleased, without consulting the faculty. The degree alluded to was conferred by them.

Dr. Hyde, from the committee appointed upon the recommendations contained in the President's inaugural, reported that they had selected a few subjects of especial interest to the profession, and named gentlemen to report to the Society, at its next annual meeting, upon the subjects specified, viz.:

1. Of Rest and the Abolition of Pain in the Treatment of Disease, Dr. T. W. Blatchford.
2. Of Internal Cancer, Dr. Alonzo Clark.
3. Treatment of Tuberculosis, Dr. T. R. Spencer.
4. Of Deformity after Fracture, Dr. F. H. Hamilton.
5. Of the Treatment of Pneumonia, Dr. A. L. Saunders.
6. Of the Comparative use of the Ergot and Forceps in Labor, by Dr. B. Fordyce Barker.
7. Of the Non-Contagious Eruptive Diseases of Children, their relation to modes of living, and their treatment, Drs. H. Townsend and Thomas Hun.
8. Of the Types of Fever, Dr. George Burr.
9. Of Croup, Dr. John A. Swett.
10. Of Epidemics—1st Senatorial District, Dr. Frank Tuthill; 2d do., Dr. G. C. Monell; 3d do., Dr. Thomas C. Brinsmade; 4th do., Dr. A. F. Doolittle; 5th do., Dr. C. B. Coventry; 6th do., Dr. A. Wilard; 7th do., Dr. E. Carr; 8th do., Dr. H. M. Congor.

The report was accepted.

Dr. Cash offered a resolution, making the election of officers the special order of business at 4 o'clock this afternoon. Adjourned.

Afternoon Session.—The minutes of the morning session were read and approved.

Dr. Van Dyck, of Smyrna, who was yesterday invited to sit as an honorary member, made a statement of the present condition of medicine and medical literature in Syria and Palestine. Formerly, the East was the garden of literature, and medical science flourished there. But now the art only exists in the hands of ignorant men. Some of them bleed with a lancet, if they have one; if not, they use a piece of glass, or any instrument they happen to have. One man, Ahu Budka, has acquired a reputation as a surgeon, and performs the operation of lithotomy frequently with only a knife. He has no skill to tell whether the operation is necessary until after he has performed it. With one of these physicians he had a dispute, the physician asserting that the liver occupied the left side of the abdomen, so totally ignorant are they of the anatomy of the human body. Leprosy is one of the terrible forms of disease that exists there, and it is truly horrible. It is considered as contagious, and those afflicted are compelled to live by themselves. In the course of the disease, the fingers or the toes become so decayed as to drop off. A journey to Damascus is usually recommended.

There is something in the air or water at Damascus, or something else, that checks the progress of the disease.

The hour having arrived, the Society proceeded to the election of officers, with the following result: For *President*.—Charles B. Coventry, Utica. *Vice-President*.—Peter Van Buren, Albany. *Secretary*.—Howard Townsend, Albany. *Treasurer*.—Peter Van Olinda, Albany. *Curisors*.—Southern District, John C. Cheeseman, Joel Foster, and William Rockwell; Eastern District, Barent P. Staats, T. Romeyn Beck, and Thomas C. Brinsmade; Middle District, John McCall, Benjamin E. Bowen, and Augustus Willard; Western District, Alexander Thompson, George N. Burwell, and Malthy Strong.

On motion of Dr. Barker, a committee of three was appointed to receive the names presented for the honorary degree of Doctor of Medicine, and from them to report such as were most entitled to the degree. Drs. Saunders, Bradford, and Willard were appointed the committee.

Dr. Rockwell, from the committee appointed to attend the examinations of the candidates for the degree of Doctor of Medicine, in the Medical Colleges in the city of New York, reported that they received invitations from the Faculties of the College of Physicians and Surgeons, and the New York Medical College, to attend their examinations. The committee did so, and with great pleasure testify to the thorough and searching examinations; and express the belief that no gentleman received a diploma who was not entitled to the same. The report says, also, that in the month of April, more than a month after the examinations had closed and the degrees been conferred, the President of the Faculty of the University School, in Fourteenth street, addressed a letter to the Chairman, Dr. Rockwell, setting forth the reasons for not acceding to the request of the committee to be present. The report was accepted. Adjourned.

Third Day — Thursday, Feb. 9.—The Secretary read the minutes, which were approved. The committee reported the names of Sardius Brewster, Jacob G. Snell, John W. Hinckley, and Elias P. Metcalf, as eligible for the honorary degree of Doctor of Medicine. On vote of the Society they were so recommended to the Regents of the University, for the Degree.

Dr. Saunders offered the following, which was unanimously adopted:—

Resolved, That the Society respectfully request and earnestly recommend that all the Colleges and Universities in this State having Medical Departments, confer no degrees of Doctors of Medicine, without the concurrence of the Professors in that department.

Dr. Cogswell called up the report of Dr. Rockwell relative to that committee attending the examinations of students at the New York medical schools. Dr. Rockwell said that at those examinations the committee were invited to ask such questions as they chose. They had, in some instances, done so, though not authorized by the Society. The committee was not invited to attend the examinations at the University. Dr. Wood said that he, as a member of that committee, had attended as many of the examinations as he could, and in no case had he seen a student embarrassed, when he was prepared for the examinations, which had been alike gratifying to the professors, the committee, and the candidates. Dr. Coventry wished the report to be referred to the committee, with instructions to publish it; and let Dr. Draper's letter, which formed a part of the re-

port, speak for itself. Dr. Rockwell said he hoped the letter of Dr. Draper would certainly be preserved as a valuable autograph. The report was referred.

Dr. Van Buren offered the following, which was adopted :

Resolved, That the refusal of the University Medical College of the city of New York to admit the committee appointed by this Society to be present at the examination of their students for medical degrees, is uncourteous to the Society, the reasons assigned unsatisfactory, and the effects upon the medical profession injurious.

A resolution was adopted, requesting delegates to draw the attention of county societies to this subject. A resolution was also passed, appointing a committee with authority to attend the examinations of the students for the degree of M. D. from such institutions in the city of New York as shall invite them. The Censors of the Southern District—Drs. Wood, Cock, Van Kleek, Kissam, Purdy, Purple, Stewart, Carter, Blakeman.

Dr. Cogswell presented the Annual Address before the Albany County Medical Society, by Dr. Quackenbush. On motion of Dr. Phelps, the thanks of the Society were presented to the Common Council of the city of Albany for the use of their chamber; and to Drs. Hun and Armsby, for their hospitable entertainment, which so largely contributed to the pleasure and social intercourse of the members of the Society. Adjourned.

EXPLANATORY.—The appearance of an article in this number criticising a review which was published in the MONTHLY for February, offers an opportunity to the Editor to make one or two statements which have not heretofore seemed necessary. In the first place, with regard to our review department, it is to be distinctly understood, that though we follow the usual custom, in this, as well as other countries, of withholding the names of our writers, still, each and every one of them is fully prepared to meet any statements he may make. Our reviewers are left entirely to their own course, and the opinions expressed are theirs individually, and not necessarily those either of the Editor or conductors. We shall give place to reviews written by *young* men of ability, as well as by the *seniors* of the profession, making no distinction in this respect, unless compelled so to do. Should such a distinction be forced upon us in reviews or communications, we shall not hesitate to give what encouragement we can to the young men, believing that those need aid who are struggling for a place, rather than those whose position is established and secure. Merit, not the age of the author, is the standard by which papers will be judged.

An explanation is also due from the editor on account of the tone of some allusions to one of the conductors of the MONTHLY, which appear in the paper referred to. Its author is entirely at liberty to criticise our reviews, and to such criticisms our reviewers are at liberty to reply—the option being left with them. To strictures upon others they will not reply, believing that each man should defend himself. Had the same remarks which in

Dr. Bauer's article are applied to Professor Carnochan been applied to any one not a conductor of the MONTHLY, we should have at once declined to publish it, because it might have placed us in a false position. No one of the conductors at all fears such remarks. Perhaps all are too much accustomed to them to care about them; and certainly it is better to meet them in print, than to be obliged to hunt them up in corners where they have been whispered. The editor will exert himself to the utmost to give free range to the discussion of scientific subjects, and will also endeavor to preserve that courtesy which should characterize such discussions.

The Maine Medical Association.—We have received a pamphlet containing the constitution and by-laws of this recently formed State Medical Association. A preliminary meeting was held at Brunswick, on the 18th of February, 1853, and the constitution and by-laws adopted on the 1st of June following; when the following officers were elected:

Dr. JAMES McKEEN, Topsham, President.

Dr. JOHN T. GILMAN, Portland, } Vice Presidents.
Dr. N. P. MONROE, Belfast, }

Dr. H. H. HILL, Augusta, Treasurer.

Dr. N. R. BOUTELLE, Waterville, Secretary.

Dr. T. G. STOCKBRIDGE, Bath, Cor. Secretary.

No less than eighty-two members had signed the constitution at the first regular meeting; and we doubt not such enthusiasm will soon atone for so long a delay in the formation of an organization so important to the best interests of the profession of that large and flourishing State. We perceive that the list of members comprises a large proportion of the most distinguished names within its limits.

We are gratified to perceive in the pamphlet above alluded to, a resolution calculated to draw at once a line of demarcation between the regular and the irregular practitioners in the State, and to assign to every medical college that has graduated irregular practitioners, the odious distinction it deserves. It is high time that this abuse were exposed and corrected; and our pages will be open to the results of all such inquiries:

"Resolved, That the Standing Committee be required to obtain the names of all the medical practitioners within their respective districts, and ascertain at what medical school each of the irregular practitioners, as well as the regular, obtained his diploma; and that the facts thus obtained be published at such time as the committee may decide upon."

If we mistake not, a very similar resolution was passed by the N. H. State Medical Society at its annual meeting, in June last. We hope these committees will faithfully perform the task assigned to them. E. R. P.

NEW YORK PATHOLOGICAL SOCIETY.—*Session of Jan. 25.*

Prof. A. Clark announced the results of some investigations he had recently made upon the "fur," found in large quantities upon the tongue of a patient in a very low state from malignant disease.

This fur had a mossy, white appearance, and was even $\frac{1}{8}$ of an inch thick, or more, covering the mucous membrane of the lips and cheeks, as well as of the tongue; could easily be separated in large quantities, and was rapidly reproduced.

On examination with the microscope, Prof. Clark found it to consist of three distinct parts—1st. Epithelial scale; 2d. Vibriones, and 3d. An abundant vegetable growth.

The 1st element presented no peculiarities. The vibriones were very large and active. These animalculæ were doubtless developed in the animal fluids retained in connection with the other two elements.

The vegetable growth was, however, altogether peculiar. The spores from which the fibres were produced, were sometimes imbedded in the epithelial cells, and sometimes packed between them; and the quantity of this vegetable growth was truly astonishing.

Dr. Clark, supposing he had made a new discovery, consulted all the more recent works to ascertain if anything of the kind had ever been previously noticed, and at last found in Robin's work, published within a few months, an accurate description of the vegetable he had independently discovered. It is by M. Robin termed the *oidium albicans*.

Prof. Clark has seen the same growth in several cases since; though he has not again seen the animalculæ also. It is sometimes developed in small spots or tufts only, on the tongue, cheeks, or lips. It is very common, he thinks, in cases of extreme exhaustion from chronic esoteric diseases—*e. g.*, in infants exhausted by diarrhoea and dysentery. In the disease called "miguët" by the French, it is believed always to exist.

In the case first spoken of, the patient found a free application of cold cream caused the fur to fall off in large quantities. It has been found necessary, in France, to apply very harsh applications to remove it, as caustics and the like, and these often fail. Prof. C. thought it a very interesting fact, if proved to be such, that this vegetable may be destroyed by so mild a remedy.

We deem it pertinent here to call attention to the fact that the sulphurous acid will probably be found a certain destroyer of all kinds of vegetable growths which are developed upon mucous membranes, or in case of skin diseases. The fact that such growths are developed in the disease called by the French "muguët"—one of the forms of aphtha—has been known for several years; and Dr. Clark alluded to the very harsh measures

resorted to by French practitioners to destroy it. Dr. Jenner, of London, of London, has also ascertained recently that four different kinds of vegetable growths are developed in the four species of porrigo or tinea—the favosa, tonsurans, decalvans, and sycosa. The particular parasite discovered by Dr. Clarke, however, had been previously noticed only by Robin.

Dr. Jenner remarked in a lecture, more than two years since,* that “considerable benefit may be anticipated from the sulphurous acid in all diseases attended with the development of parasitic plants,” and especially mentions porrigo. He has recently tried its efficacy in all the four varieties above mentioned of this disease, and with entire success.

He also finds the *sulphite of soda* (3 j. to ʒ j. of water) will often cure *thrush*, by destroying the vegetable growth, in 24 hours. Here the sulphurous acid is set free in the mouth by the combination of the soda with the acid in its secretions.

We find that this acid was first recommended by Professor Graham, of London, to destroy parasitic vegetation, and for the cure of the cholera, at a time when this disease was believed by some to be produced by an entophyte in the alimentary canal. Dr. Jenner finds it will check fermentation by destroying the *torula cerevesiæ*; and has also given it to destroy the *sarcina Goodsirit*.

We, therefore, think it settled, that in all skin diseases accompanied with the development of parasitic vegetation, the sulphurous acid is the remedy. The gas is passed into water, till the latter is saturated; and a lotion is made, by adding, to one part of this, three parts of water. Whether still other skin diseases are of parasitic nature, remains to be decided; and we are happy to learn that our friend, Dr. J. B. Upham, of Boston, has entered upon the investigation of this interesting question.

This acid will also, we doubt not, prove curative of all diseases of parasitic origin, or mucous membranes: the sulphite of soda also answering the purpose in certain circumstances, as before explained. Moreover, this is a mild, and not a disagreeable remedy. And the cases requiring it will not be found to be rare, now that Dr. Clark has been the means of directing the attention of the profession in this country to this subject.

We should add, that the accidental presence of the vibriones in the decomposing animal fluids, in Dr. Clark's case, is a fact parallel to their occasional existence in the secretions of the vagina, or in cases of syphilitic ulcers.

Several interesting pathological specimens were presented before the Society. We regret that our space will not allow of a particular account of them; nor of an interesting discussion by Drs. Sayre, Markoe, and Clark, in regard to the propriety of making free openings into joints, in case of destructive disease of the articular cartilages.

E. R. P.

* Medical Times and Gazette, Aug., 1851.

OF CARNOCHAN'S CASE OF RESTORATION OF THE ENTIRE LOWER LIP.

CANCER OF THE LOWER LIP.

Nº 1.



APPEARANCE OF THE PATIENT AFTER THE OPERATION,
No 2.



*The lines on the face show the cicatrices resulting from
the operation, as seen seven weeks after.*

THE AMERICAN MEDICAL MONTHLY.

APRIL, 1854.

PART I.—ESSAYS, MONOGRAPHS, AND CASES.

On the subject of Priority in the Medication of the Larynx and Trachea.

By HORACE GREEN, M. D.

I feel that some apology may be considered due from me to the readers of the MONTHLY, and to my professional brethren generally, for claiming their attention to the matter of *priority* in the application of a solution of nitrate of silver to the interior of the larynx and trachea.

If so, let it be remembered—as many of the profession certainly will remember—that, when the subject of cauterizing the mucous membrane of the air passages was first brought before the medical public, many years ago, by the writer; when it was asserted that a sponge-probang loaded with a solution of nitrate of silver, “could, not only without injury, but with manifest advantage in disease, be passed through the glottis and larynx down into the trachea;” that then, the *savans* in the medical profession pronounced it an “anatomical impossibility,” an “unwarrantable innovation in practical medicine;” whilst many others, anxious to echo these sentiments, but less cautious of their phraseology, did not hesitate to denounce the author a charlatan, and his practice a “humbug!” If, in connection with these antecedents, it is remembered that now, when this once condemned practice has gained adherents among the best of the profession in every country, and is admitted, by high authority, to be not only a “most valuable addition to practical medicine, but that the results of this method of treatment will lead to important changes in the prophylaxis and cure of pulmonary phthisis;” * when nearly all the leading journals of Europe have

* British and Foreign Medical Review, Vol. XXIV., p. 504.

reviewed and, in every instance, have commended the practice; when many foreign books and monographs have been written on the different diseases of the air-passages for which this treatment is appropriate, in all of which reviews and works, the credit of the introduction of topical medication to the air-passages has been accredited to the writer;—When, I repeat, after all these things, the attempt is now made in Europe (as it had been done repeatedly before in this country, and by those too who were, at first, the foremost and the loudest to denounce the practice and its author) to give the priority of the treatment to others, who never shared, in any degree, in the obloquy attending its introduction; it will be admitted, I think, that there is a propriety in submitting to the candid portion of the profession, the question involved in the following statement of facts.

A few days ago, my friend, Dr. Mott, of this city, put into my hands a copy of the *Gazette Hebdomadaire de Médecine et Chirurgie*, which was published in Paris, Jan. 27th, 1854. This No. of the *Gazette Hebdomadaire*, which is a widely circulated medical journal, contains the following letter, addressed to the editor, by Dr. John G. Adams, of this city.

“MONSIEUR LE REDACTEUR—

J'ai, par l'obligeant intermédiaire de M. Robert, fait hommage à la Société de Chirurgie, dans sa seance du 4 Décembre, 1853, d'une tige porte éponge à trois branches, entièrement semblable, *pour la forme*, à celles dont on se sert aujourd'hui à New York, avec les modifications imaginées par M. le docteur Buck, Chirurgien de New York City Hospital, et les perfectionnements de M. Charrière, fils. Permettez moi d'entrer, à cette occasion, dans quelques détails historiques et pratiques.

La priorité a été réclamée, au sujet de l'invention de l'instrument lui-même et au sujet de son introduction dans la cavité laryngienne.

Je puis affirmer, après des recherches consciencieuses, que l'instrument a été imaginé par M. le docteur David Green, dans le but d'appliquer une solution de nitrate d'argent au larynx, au pharynx, et à l'œsophage. Il se servait d'abord d'un catheter mâle, avec un morceau d'éponge attaché au bout par un fil. Après plusieurs expériences, il a fini par adopter une tige en baleine, courbée en quart de cercle avec une éponge attachée par des fils solides. Cet instrument avait un inconvénient: les fils s'usaient en peu de temps; l'éponge pouvait se détacher, accident des plus graves si elle eût été à ce moment engagée dans le larynx. En outre, on était obligé d'avoir un grand nombre d'instruments, pour ne pas employer la même éponge chez plusieurs malades. M. Buck a fait fabriquer une pince d'argent, à deux branches, avec un anneau coulant destiné à fixer l'éponge. Enfin, plus récemment, ayant eu occasion de demander une pince semblable, à M. Charrière, fils, celui-ci jugea utile d'y ajouter une troisième branche, pour mieux retenir l'éponge et éviter tout danger d'échappement. Dans l'instrument ainsi construit, une des branches est munie d'un point d'arrêt, par-dessus lequel peut passer un anneau coulant constricteur, à l'aide d'une encoche de baïonnette; une fois que l'anneau a traversé le point d'arrêt, on

lui fait exécuter un demi-tour, et alors, ne pouvant plus reculer, il fixe l'éponge de la manière la plus solide.

Maintenant, qui s'est servi le premier de cet instrument, pour porter une solution caustique jusque dans le larynx? M. Horace Green, de New York, soutient, dans l'introduction de son ouvrage sur la bronchite, qu'en 1841, deux ans avant la publication de la traduction en Anglais de l'ouvrage de MM. Trousseau et Belloc, il avait l'habitude d'appliquer la cauterization au larynx. Je dirai, à ce sujet, que les travaux de MM. Trousseau et Belloc étaient ultérieurement connus en Amérique, où M. le Professeur J. M. Smith en avait parlé dès 1828, dans ses leçons à l'Université de New York.

En France on a mis en doute la possibilité d'introduire l'éponge jusque dans le larynx. J'ai, pourtant, constaté ce fait par trois fois, de la manière la plus formelle.

M. Green va plus loin : il affirme avoir pénétré *dans la trachée jusqu'à sa bifurcation*, et cela facilement et sans inconvénients. Je me borne à répéter l'assertion.

Agréez, etc."

"JOHN G. ADAMS,

Ancien Secrétaire de l'Académie de Médecine de New York,

Ancien éditeur du *Medical Times* (New York), etc."*

* [TRANSLATION.]

"Mr. EDITOR—

Through the kind intermediation of M. Robert, I submitted to the Surgical Society, at its meeting on the 4th of December, 1853, a sponge probang, with three prongs, exactly similar, in respect to form, to those now in use in New York, with the modifications invented by Dr. Buck, Surgeon of the New York Hospital, and the improvements added by M. Charrière. Allow me, at this time, to enter into a few historical and practical details.

The priority of the invention of the instrument itself, as well as of its introduction into the laryngeal cavity, has been a matter of dispute.

I can affirm, after conscientious investigation, that the instrument was invented by Dr. David Green, with the design of applying a solution of nitrate of silver to the larynx, the pharynx, and œsophagus. He, at first, made use of a strong catheter, with a bit of sponge fastened to the end with thread. After several experiments, he finally adopted a whalebone, curved in the form of a quarter-circle, with a sponge fastened by strong thread. This instrument was inconvenient in one respect: the thread became worn after a little time, and the sponge might get unfastened, an accident which would be attended with the gravest consequences; should it occur while in the larynx. Besides, it was necessary to have a great number of instruments, in order not to use the same sponge for several patients. Mr. Buck caused silver forceps, with two prongs, to be manufactured, with a sliding ring intended to fasten the sponge. Finally, having recently had occasion to procure similar forceps from M. Charrière, he (M. Charrière) judged it expedient to add thereto a third prong, in order the better to hold the sponge, and to avoid all danger of escape. In the instrument thus constructed, one of the prongs is armed with a catch, above which a sliding-ring can pass, by means of a notch and slide of the form used to fasten bayonets; when the

That attempts to do me injury were being made among my professional *confrères* abroad, and especially with those who have honored me with their acquaintance and correspondence, I have been for some time fully aware. Indeed, before Dr. Adams reached Europe I was given to understand, from a reliable source, that such efforts would be made; and these intimations were fully confirmed by letters subsequently received from my friends in Europe, and through other sources. This matter, then, comes not unexpectedly, and I have only been waiting for some such public manifestation as is exhibited in the above letter, to counteract, in the best way in my power, the injuries attempted to be wrought by Dr. Adams, in the fulfilment of his *honorable* and *patriotic* mission.

With regard to the *priority* in the invention or improvement of this particular instrument, I have nothing to say, although every medical man who has visited me during the last four or five years, might have seen an instrument, its counterpart in every essential characteristic, which has been in use in my office since 1849. This instrument for cauterizing the larynx was invented by my friend and assistant, Dr. J. W. Richards.

This matter of the instrument, however, is of but little moment; yet Dr. Adams considered an improvement, or slight modification, in a throat probang, made by "Dr. Buck, of the New York Hospital," of such grave importance, that he first induced M. Robert to bring it before the Society of Surgery, in Paris; and then publishes, with a drawing, a full description of it, in one of the leading French medical journals! In doing this, however, Dr. A. takes the occasion to utter so many misrepresentations (not to characterize these acts by a harsher term) with respect to myself, and the priority

ring has once passed the catch, it must be turned half-way round, and then, not being able to slip back, the sponge is fastened in the strongest manner.

Now, who first made use of this instrument to carry a caustic solution into the larynx? Mr. Horace Green, of New York, declares, in the introduction to his work on bronchitis, that, in 1841, two years before the publication of the English translation of MM. Trousseau and Belloc's work, he was in the habit of applying cauterization to the larynx. I will say, upon this point, that the labors of MM. Trousseau and Belloc were further known in America, where Professor J. M. Smith had spoken of them as early as 1828, in his lectures at the University of New York.

In France, the possibility of introducing the sponge into the larynx even, has been doubted. I have, however, fully proved this fact three times in the most formal manner. Mr. Green goes farther: he affirms that he has penetrated *into the trachea as far as its bifurcation*, and that too, easily and without inconvenience. I limit myself to a repetition of the assertion.

Accept, &c.,

JOHN G. ADAMS,

Former Secretary of the Academy of Medicine, of New York,

Former editor of the Medical Times (New York)."

of the introduction of medication into the cavity of the larynx, and has made these statements, as I have learned from other sources, to many of my professional friends in Europe, with the manifest intention of injuring me in their estimation, that I feel compelled to adduce certain facts, which can be fully substantiated, and which will disprove most emphatically the assertion of Dr. Adams.

In the first place, Dr. A. declares, that the priority of invention of the instrument for cauterizing the larynx, as well as that of its introduction into the laryngeal cavity, has been a matter of dispute.

2d. That after "conscientious investigations," he can affirm that the instrument was invented by Dr. David Green, with the design of applying a solution of nitrate of silver to the larynx.

3d. That "*Mr.* Horace Green, of New York, declares, in the introduction of his work on Bronchitis, that in 1841, two years before the publication of the English translation of MM. Trousseau and Belloc's work, he was in the habit of applying cauterizations to the larynx."

That "the labors of Trousseau and Belloc," Dr. A. will say, were known in America, where Professor J. M. Smith had spoken of them, as early as 1828,* in his lectures at the University of New York.

Now, each and all of these assertions, as Dr. A. "conscientiously" knows, are without any foundation in truth.

The facts, in relation to the history of the instrument for medication of the air-passages, and of the diseases for which this practice was particularly instituted, are briefly these. In 1832, as I have stated in my work on "Diseases of the Air-Passages" (p. 45), a case of well-marked *follicular disease* came under my notice. It occurred in a clergyman in New England, and was the first case to which my attention had ever been called. The disease had extended into the larynx, producing constant irritation in those parts, and an entire loss of voice; and this in a robust individual, otherwise in good health. All the ordinary means of treatment then known for laryngeal diseases, such as local depletion, counter-irritation externally, with alteratives and antimonials internally, were perseveringly employed, without in any degree relieving my patient. During the treatment of this case, another of equal interest and importance came under my observation. This patient was the Rev. Dr. Lindsly, then the officiating clergyman of Park Street Church, in Boston, who, from the severity of the disease, was

* The works of Trousseau and Belloc were not published in Paris until 1837, yet Dr. A. affirms that they were known in America, "where Professor J. M. Smith had spoken of them in his lectures at the University of New York, as early as 1828"! This is a remarkable *anachronism* to be made by one who claims to be so "conscientious" in his researches.

obliged, for several years, to relinquish altogether his official duties. The similarity of the symptoms in these two cases, the persistence of the disease, and the utter failure of all treatment to benefit my patients, called my attention, very decidedly, to all these points. It was in the first years of my professional life, and, until then, I had not lost my faith in the certainty of the healing art. From this time, I set about my inquiry into the nature of a disease whose pathology and treatment could not, I was confident, be found in the books. For this purpose, when I could leave my country practice, I visited, at different periods, the principal hospitals in the United States. I addressed letters of inquiry, on the subject of this disease, to eminent medical men, as some of them, now living, will remember. I collected together the history of a large number of cases of the disease, then called "Clergyman's sore throat," "Throat ail," &c.; and from all these, and from subsequent observations, I adduced those views which I have elsewhere given, of the nature and pathology of "Follicular Disease of the Air-Passages,"—views, which, in this connection, I may be permitted to say, have been since adopted by almost all pathologists who have written on the subject. In 1838, two years after my removal to this city, I visited the hospitals of Europe; and one of the principal reasons for making this tour was, to ascertain from the medical *savans* in Europe, if any discoveries or improvements had been made by them in the pathology and treatment of laryngeal and pulmonary diseases. It was whilst absent at this time, as I have before stated in my writings, that I obtained, in a conversation with Sir James Johnson, of London, who has since died, the first idea I had ever entertained of the possibility of entering the cavity of the larynx with medical agents. At this interview, in alluding to the difficulties and the uncertainty which attended the treatment of laryngeal disease, Dr. Johnson intimated that all modes of treatment would fail us, until appropriate therapeutic remedies could be applied directly to the lining membrane of these parts. This observation, in connection with my past experience of the nature of the disease, and especially of its local character, made on my mind an abiding impression.

As I state in the introduction of my work, I returned home from Europe the middle of November, 1838. On the 26th of November, ten days after my arrival in New York, the Rev. Mr. Tilden, of Rutland, Vermont, who had suffered many months under follicular laryngitis, came under my care, and was treated by topical applications of the nitrate of silver to the pharynx and larynx. The history of this case I find recorded in full in my case book at the time; and, moreover, Mr. Tilden still lives, and will testify to these facts. In the course of 1839, I treated many cases of laryngeal disease, by topical medication; and in November, 1839, I reported before the "New York Medical and Surgical Society" (of which Dr. Adams was

at that time a member), some ten or twelve cases of chronic laryngitis,—as the records of that Society will show,—which had been treated by me in the same manner; and yet Dr. A. attempts to convey the impression, by a direct misrepresentation in regard to what I have said in my introduction, that it was not until 1841 that “Dr. Green was in the habit of applying cauterizations to the larynx.” But, on this point, I have only to give Dr. Adams’ own testimony. In the proceedings of the meeting of the New York Medical and Surgical Society, held Sept. 19th, 1840, is the following record: “Dr. Green made some remarks on laryngitis, particularly as it occurs in clergymen; considers the disease as commencing in the fauces and throat. The larynx does not become involved until some time afterwards. Has generally succeeded with local applications and constitutional remedies. Latterly, has used with advantage a strong solution of nit. argent, x to xxx grs. to ℥ i water, *introduced into the glottis by a sponge and probang*. Fifteen cases reported in all.”

This record of the doings of the Society is in Dr. Adams’ *own handwriting*, and has appended to it the signature of “JOHN G. ADAMS, *Sec’y*.” If any further proof is necessary to establish the very strange perversity of Dr. Adams, in this matter, it may be found in the following facts; all of which can be fully substantiated.

In 1843, four years after I had employed cauterization of the larynx with the sponge-probang, and *one year* after Dr. A.’s own testimony to this fact, the man to whom he now gives priority, *Dr. David Green*, called at my office, and saw, for the first time, my instruments for the treatment of laryngeal and bronchial disease by topical medication. I had not met Dr. Green before, and at this interview I not only exhibited my instruments, but explained to him my method of introducing medication into the air passages; and it was after this that Dr. G. employed the same form of probang that I was then using, and had been employing for several years. Dr. Green at this time made no allusion whatever to the subject of his ever having made any attempt, by means of any instrument, to cauterize the larynx. If he had done it previous to 1838, he certainly should be able to give names and dates, and thus establish the claim made by Dr. A. to “priority.” Dr. Adams, however, knew well, when he addressed his letter to the editor of the Gazette, that neither Dr. David Green or any other man preceded me in this matter. He knew perfectly well that as late as 1847, a part of the members of the New York Medical and Surgical Society (and these are historical facts in the unwritten proceedings of medical *cabals* in our city), who had condemned the practice of topical medication, and had repeatedly and publicly denied the possibility of cauterizing the interior of the larynx—that these men formed themselves into a *clique*, of which he was one of the most active members, for the acknowl-

edged purpose of effecting my professional ruin ; and all this for the reason, and only for this reason, that I would persist in employing, and had written a book recommending, topical medication in the treatment of laryngeal and bronchial diseases ; a practice which the chairman of their committee (Dr. J. A. Swett) appointed to inquire into the matter, declared to be "a dangerous and an unwarrantable mode of treatment." He knew, too, that he was one of the "thirteen," who, for the above cause, and to effect the purpose to which I have alluded, obtained a majority vote in the New York Medical and Surgical Society, on the following preamble and resolution ; namely, that, "Whereas Dr. Horace Green has rendered himself disagreeable to a majority of the members of this Society, therefore, resolved, that he be requested to withdraw from the Society." Thus violating the constitution of the Society, and outraging every honorable principle of professional or gentlemanly associations.

Dr. Adams also knew that his "conscientious researches" consisted in this : that several members of this very party, after the practice which they had failed to suppress had gained credit with the profession, called on Dr. David Green (as Dr. David Green himself assured me), and "endeavored to persuade him to testify that he had preceded me in making medicinal applications to the cavity of the larynx"! But this Dr. Green refused to do.

"I limit myself" to this record of facts with regard to the first and principal statements in Dr. Adams' letter.*

It remains for me to examine briefly that portion of Dr. Adams' communication, in which he refers to the labors of MM. Trousseau and Belloc, and in which he endeavors, by a direct misstatement, as I have shown, in regard to facts and dates, to convey the impression that I have not accorded to these distinguished writers the honor which is their due. This is not a recent accusation. It originated with a portion of the members of that society to which I have alluded ; and on the publication of my work on Diseases of the Air Passages, it was reiterated ; and it was also asserted by several medical journals in my own country, that "in applying topical remedies to the laryngeal cavity, I had done so after the manner of MM. Trousseau and Belloc."

As this is not true, for I commenced with my method of cauterizing the

* Should Dr. A. for any reason be unable to bring to mind these reminiscences of the past, he must be able, I am quite sure, to recall the fact that, several years before the last events to which I have alluded, he placed himself under my care, and was treated (successfully, I believe) for pharyngo-laryngeal disease, by excision of the uvula, and topical applications of the nitrate of silver to the diseased parts. If the question should arise in the minds of any of the readers of the MONTHLY, why, under these circumstances to which I have alluded, Dr. A. did not apply for professional aid to the physician who, from having been the first to practice cauterization, as Dr. A. affirms, must have been the most experienced expert, I cannot answer.

larynx before I knew of the writings of Trousseau and Belloc; and inasmuch as this question has not been considered, so far as I know, by any writer here, I shall take the opportunity to show that foreign authors have accredited to me an honor which many of my own countrymen have evinced great anxiety to deny me. In none of my writings have I claimed priority in medicating the mucous membrane of the larynx. On the contrary, it will be seen by a reference to the work of which I have spoken, that I have there expressly said, that "to MM. Trousseau and Belloc belongs the honor of having been the first to prescribe and employ topical medication in chronic diseases of the larynx," p. 203. This, however, I do claim, that I was the first to pass a sponge-probang, loaded with a strong solution of nitrate of silver, below the epiglottis, through the larynx and rima glottidis, down into the trachea; thus reaching, with more certainty and more effectually, the disease of these parts. I claim that I was the first to apply topical medication, in *this way*, in the treatment of chronic and acute laryngeal diseases, in bronchitis, asthma, and in membranous croup.

This operation has never been claimed by M. Trousseau, nor by any of his own countrymen for him, as I shall be able still farther to prove.

By referring to the work of Trousseau and Belloc, it will be seen that when they desired to cauterize the "top of the larynx" the operation was performed after this manner:

"We saturate completely," they say, "our sponge with a solution of nitrate of silver; that done, we cause the mouth to be opened wide, depress the tongue with the handle of a spoon, and introduce the port-caustic. As soon as it has passed over the isthmus of the gullet, it produces an effort of deglutition, which raises the larynx. We seize this moment for bringing forward the sponge, which, in the first part of the operation, had been carried to the entrance of the œsophagus. By this means we reach the opening of the larynx, by elevating the epiglottis; and then, by pressure, it is easy to express the caustic solution into the larynx."*

This account of MM. Trousseau and Belloc's method of operating is also given in full, in my work on bronchial diseases. Since the publication of this work, some of the British writers have claimed for Sir Charles Bell priority in the application of caustic to the aerial mucous membrane. In a

* Nous imbibons complètement notre éponge d'une solution de nitrate d'argent; cela fait, nous faisons ouvrir largement la bouche, nous abaïssons la langue avec le manche d'une cuiller, et nous introduisons le porte-caustique. Dès que l'on a dépassé l'isthme du gosier, il s'opère un mouvement de deglutition qui porte le larynx en haut. Nous saisissons ce moment pour ramener en avant l'éponge, qui, dans le premier temps de l'opération, avait été enfoncée jusqu'à l'entrée de l'œsophage. Par cette manœuvre, on revient sur l'entrée du larynx en relevant l'épiglotte, et il est facile alors, en appuyant, d'exprimer la solution caustique dans le larynx.—*Archives Générales de Médecine. Tome III., p. 313, 1838.*

work recently issued from the London press, by Dr. John Hastings, "on Diseases of the Larynx and Trachea," and their treatment "by the local application of caustics," the author remarks: "This mode of treatment appears to have been first employed by our distinguished countryman, Sir Charles Bell, who little conceived how valuable it would eventually be found, or how extensively it would be employed."*

Dr. Hastings admits that "the great merit of its revival is mainly due to Dr. Horace Green, of the United States, who published the first work that has been wholly devoted to this subject; and it is only doing justice to Dr. Green to acknowledge the great value of his labors in this new field of inquiry. But so little attention and consideration had the treatment received from the medical world, that in some of the reviews of Dr. Green's works in this country, the critics seem to have been wholly unaware of the labors of Sir Charles Bell, and awarded to Dr. Green the merit of its introduction, instead of giving it to their own countryman."† The operations of Sir Charles Bell consisted in his having performed cauterization of the larynx, in several instances, as early as 1816; eleven years before the publication of the work of MM. Trousseau and Belloc. In the "Surgical Observations," &c., of Charles Bell, published in London, in 1816, will be found a record of these cases. In one instance, noticed in this work, a young woman was brought into the hospital with extensive ulcerations of the glottis. Mr. Bell's manner of operating in this case, is thus described by himself: "I made a small pad of lint, and attached it to the ring of a catheter wire, and bent the wire so as to pass over the tongue and epiglottis; I dipped the lint in a solution of twenty grains of the caustic to half an ounce of water, and touched the glottis with it in this manner. With the finger of my left hand I pressed down the tongue, and stretched the forefinger over the epiglottis; then, directing the wire along my finger, I removed the point of the finger from the glottis, and introduced the pad of lint into the opening, and pressed it with my finger."‡

This treatment was "considered hazardous," and Sir Charles Bell did not continue to employ it. "That great man," says Dr. Hastings, "was too much occupied with other pursuits to work out the discovery in the manner it deserved. I call it a discovery, because it was previously, and by most practitioners is still, believed to be utterly impossible to pass any foreign body into the larynx and trachea, without producing violent spasm or even suffocation. Such opinions have often reached me, coming from men occupying the highest walks in their profession, who ought to be imbued with

* Treatise on Diseases of the Larynx and Trachea. By John Hastings, M. D., &c. London. Introduction, p. v.

† Op. Citat, p. xi.

‡ Surgical Observations, being a Quarterly Report of Cases of Surgery. By Charles Bell: London, 1816, page 34.

a sufficient degree of liberality to prevent the condemnation of a practice, or, indeed, the denial of its practicability, for no better reason than that they do not understand it themselves.”*

Besides Sir Charles Bell, there are several other English surgeons for whom some credit has been claimed by foreign writers, for the revival of this practice, since Mr. Bell's day. Mr. Vance, a naval surgeon of eminence in London, was in the habit of employing topically a solution of nitrate of silver, in the treatment of laryngeal diseases. Mr. Vance does not appear to have left any record of his labors on this subject; but from the great success he met with in practice, Mr. Hastings thinks he must have applied the solution both to the larynx and trachea; although medical men, who were intimately acquainted with his mode of practice, have informed Mr. Hastings “that he never introduced the solution of the nitrate of silver below the glottis, but contented himself with sponging the back of the throat.”†

Dr. Stokes, in his work on “Diseases of the Chest,” remarks: “The best means of applying these caustic lotions is that practised by Mr. Cusack: a brush of lint, of the requisite size, is sewed on the end of the finger of a glove, which is then drawn on the index finger of the right hand. The patient should be made to gargle with warm water; and the lint, being dipped into the solution, can be at once, and with great facility, carried to any part of the pharynx, and even to the rima.”‡ After the death of Mr. Vance, no one was found, Mr. Hastings says, to take up the treatment which had proved so successful in the hands of this surgeon, and it remained entirely neglected in London, until revived by himself, after the publication of my work in 1846.

This, then, constitutes a brief history of what has been done in Europe, by those who have employed the local application of caustics, in the treatment of diseases of the air-passages. By this, it will be seen, that no one had succeeded, or claimed to have succeeded, in passing the sponge-probang, wet with the caustic solution, into the larynx, until after the announcement in my work, published in 1846, that “it is an operation which, in the treatment of laryngeal disease, I have been in the practice of performing every day for several years.”

Previous to that time, the medication of the larynx and trachea by cauterizations, in the numerous forms of disease of these organs, had only been ventured upon by a few individuals in Europe; and in the practice of these, it was limited to the “sponging of the back of the throat,” or, at the most, to the application of the solution to the aperture of the glottis, or, by pressure of the sponge, to the discharge of the fluid into the larynx. In

* Op. Citat. Introduction, p. xii.

† Op. Citat. Introduction, p. viii.

‡ A Treatise on Diseases of the Chest, page 258.

this country, so far as I am aware, previous to that time the employment of caustic solutions to the interior of the larynx and trachea, was "entirely neglected." Now this treatment receives the sanction of, and is employed by, the most eminent men of our profession, not only in my own but in almost every country in Europe. It has not only proved successful in the treatment of follicular disease of the air-tubes, and in the ordinary forms of angina, but eminently so in the management of many cases of whooping-cough, and of membranous croup. If there is any honor in the revival and introduction of this practice, *that honor I claim*; and, inasmuch as some of my own countrymen, from its first introduction, have labored anxiously, and are yet striving, to rob me of this honor, I may be excused, I trust, for calling in here the testimony generously granted by foreign writers, in my favor:

"Having thus given an ample analysis of Dr. Green's work," say the editors of the *British and Foreign Medical Review*, "it remains with us to propound briefly a critical estimate of its value. * * * * It would appear, from various testifying documents, which the author has collected in an Appendix, that his statement as to the practicability and safety of topical medication in laryngeal disease, was met by some of his countrymen by a sneering incredulity. There can be no doubt, however, that this part of the question is set entirely at rest; nor does the previous publication of the methods used by Bell, Vance, and Trousseau and Belloc, detract at all from the merit due to Dr. Green, for his persevering and successful attempts to render the treatment of some forms of pulmonary diseases more effectual and certain.

"We have adopted this mode of treatment recommended by him, and can corroborate his statements as to its great value. Cases of pulmonary affection have, in our hands, been brought to a satisfactory termination, which we are quite sure, under the treatment ordinarily adopted, would have terminated fatally; and we remember individuals whose cases terminated fatally, who (we feel equally certain) need not have died, at least of that disease which cut them off. This much is due to Dr. Green."*

In a review of the same work, in the "London Medical Gazette," after an allusion to what others have accomplished in this branch of practical medicine, the reviewer says: "The French pathologists may have anticipated the author, in some degree, by the local application of the nitrate of silver to the fauces; but Dr. Green was the first to extend its use successfully to parts *below the epiglottis*, in various inflammatory diseases of the vocal organs."†

* British and Foreign Medical Review. Vol. XXIV, p. 504.

† London Medical Gazette, Vol. IX, p. 1065.

In the "Dublin Quarterly Journal of Medical Science," the subject is also discussed, and the following conclusion announced. "MM. Trousseau and Belloc employed a solution of the strength of two drachms to the ounce, or sometimes to the half-ounce, of distilled water. Their method of applying it was either by means of a small silver syringe, with a long, curved tube, which could be introduced beyond the epiglottis, or by saturating a bit of sponge, attached to a rod of whalebone, which, being pressed firmly against the back of the pharynx, discharges some of the solution into the glottis, principally by the involuntary effort of deglutition which it excites. This latter method we have ourselves frequently used with much success. But Dr. Green has found another method of applying the solution to the laryngeal mucous membrane, so simple and so efficacious, that, as we before remarked, he has been induced to publish this volume upon its merits.

* * * * *

We shall only say, that we are fully convinced of the originality of observation displayed by our author, and of the perfect truth of the statements contained in his Treatise."*

It is well known that Professor Bennett, of the Edinburgh University, has adopted extensively, topical medication in the treatment of laryngeal and kindred diseases, in the Royal Infirmary and in his private practice. In his clinical lectures on the subject, published in the "Edinburgh Monthly Journal of Medical Science," he remarks: "This practice, introduced by Dr. Horace Green, of New York, consists in the direct application of a solution of nitrate of silver to the interior of the larynx and trachea. Numerous attempts had been made, with more or less success, by Sir C. Bell, Mr. Vance, Mr. Cusack, and MM. Trousseau and Belloc, to carry this practice into effect; and the results obtained, even by their imperfect efforts, exhibited the great advantages which were to be derived from it, in the treatment of laryngeal diseases. Now, thanks to Dr. Green, we can with safety and certainly apply various solutions directly to the parts affected."

In reporting the above clinical lectures, the history of two cases of interest are given by Professor Bennett, in the treatment of which he saw, for the first time, the application of caustic to the interior of the larynx and trachea. It occurred in the summer of 1851, when, on a visit to Edinburgh, I was invited by Dr. Bennett to visit the Royal Infirmary, and to perform the operation on several patients in his ward, who were suffering from *laryngeal phthisis*. I quote these cases as abbreviated in Braithwaite's Retrospect.† The first case alluded to, was one of an aggravated form of chronic laryngitis: "On the 30th of June, notwithstanding the assiduous use of astringent gargles, occasional sponging of the fauces with solution of

* The Dublin Quarterly Journal of Medical Science, Vol. IV, p. 441.

† No. XXIV., page 99.

nitrate of silver, and the application of leeches, the patient was evidently worse, and he could only speak in a whisper.

"*July 6th.*—To-day, Dr. Horace Green, of New York, who went round the wards with Dr. Bennett, stated that this was a remarkably good example of what he had named follicular disease affecting the larynx. He passed the sponge, saturated with a solution of nitrate of silver (℥ij. to ℥j. of water), through the larynx into the trachea. The patient could not take a breath for some seconds afterwards, and described the sensation as like that produced by a piece of food 'passing down the wrong way, and causing choking.' The immediate effect of the operation was decided improvement of the voice, and more ease in deglutition. From this time, his symptoms gradually left him. On the tenth, the sponge was again passed into the larynx by Dr. Bennett, and produced the same sense of temporary suffocation; but immediately afterwards he spoke with perfect clearness of voice. The application was made every second day, until the 16th, when all the laryngeal symptoms had disappeared, the voice was normal, and there was no cough, expectoration, pain, or difficulty of deglutition. He now left the house."

"*Case 2.*—Helen Guthrie, æt. 25, married, a fisherwoman, admitted into the clinical ward, July 4th, 1851. Four months ago was seized with a cough, attended with hoarseness of the voice, dryness of the throat, painful deglutition, and pain in the larynx, which symptoms have continued with greater or less intensity up to the period of admission. Latterly, there has been considerable expectoration of purulent matter, often tinged with blood. On admission, she complains of cough coming on in paroxysms, dryness in the throat, and pain in the larynx, voice cracked, and occasionally absent. There is no difficulty in swallowing, but copious expectoration of frothy mucus. Can inspire without difficulty. Percussion over chest elicits nothing abnormal. On auscultation, the inspiratory murmur is harsh over superior third of chest on both sides. Over larynx and trachea there is heard a dry, snoring sound. On examining the fauces, red patches were observable here and there, with slight erosion on the left side. The fauces and epiglottis were sponged with a solution of nitrate of silver (℥j. to ℥j. of water). This was repeated on the following day, and the voice was evidently improved. On the 6th, the sponge, saturated with the solution, was passed into the larynx, by Dr. Horace Green, of New York, and produced no feeling of suffocation whatever. It was passed afterwards every day by Dr. Bennett, till the 14th, when she left the house, all the laryngeal symptoms having disappeared, and the voice nearly restored to its proper tone."

It was during this same visit to Great Britain that, whilst in London, I was requested by Drs. Quain, Williams, Cotton, &c., physicians of the Hospital for Consumption and Diseases of the Chest, at Brompton, to meet

these gentlemen and their associates, at the wards of this charity, and perform in their presence the operation of cauterizing the interior of the larynx and trachea. This I did on two different occasions, and performed the operation on many patients in the presence of the medical staff of this institution, and other distinguished members of the profession.

In Dr. Cotton's excellent work, since published, on Consumption, the author candidly admits his previous unbelief in, and present changed views with regard to, the practicability or propriety of topical medication to the mucous membrane of the respiratory passages. The admission is honorable to himself, and worthy of imitation. "I should here remark," observes Dr. Cotton, "that my own views upon this subject differ from those I formerly held, and have even expressed; and that I owe this change to the kindness of Dr. Horace Green, of New York, the justly celebrated advocate of this treatment, who, during a recent visit to our metropolis, convinced myself and others, not only of the possibility, but of the safety and usefulness of the practice.

"I had long been in the habit of using a solution of nitrate of silver to the pharynx and upper surface of the epiglottis, by means of a soft brush. * * * But I had never ventured to apply any thing directly to the larynx itself—not from any doubt as to its possibility, but from misgivings as to its effects, and apprehension of its danger. For some months past, however, I have done so extensively in cases of chronic laryngitis, whether idiopathic or tubercular, and very frequently with marked success. * * * I have known the voice regained, the irritable cough removed, and the tenderness and difficulty of swallowing dissipated entirely by it; indeed, I think we might also speak of its *curative* effects (so far, at least, as the larynx is concerned) in some very early cases."*

In conclusion, I beg to be permitted to give the testimony of M. Trousseau himself on this question; the man to whom of all others many of my own countrymen (for Dr. Adams is not alone in this matter) have labored, ever since the issue of my treatise, to give all the merit for the introduction and practice of topical medication.† For M. Trousseau I entertain the

* "The Nature, Symptoms, and Treatment of Consumption;" being the Essay to which was awarded the Fothergillian Gold Medal of the Medical Society of London. By Richard Payne Cotton, M. D., Member of the Royal College of Physicians, London, &c., pp. 236-7.

† In proof of this, I would refer the reader to the notices of my works on "Diseases of the Air Passages," and on "Membranous Croup," by American reviewers; particularly to the reviews of these treatises by a writer in the "American Journal of Medical Sciences." Of the character of these reviews in this Journal, with regard to *fairness, impartiality, and justice*, as well as of the merit or demerit of the works reviewed, I am quite willing to leave the candid and unprejudiced portion of the profession to judge.

highest respect. By his professional labors, and through his many important contributions to practical medicine, he has gained a distinguished reputation, not only in his own country but throughout Europe and America. During a visit to Paris, two years ago, I had an opportunity, through his friend Dr. Simpson, of Edinburgh, to make the acquaintance of Professor Trousseau. We had several conversations on this subject of topical medication. In answer to his inquiries, I gave him the full particulars of my own operations, in which he appeared much interested—particularly so when I related to him what had been accomplished in this country in the treatment of membranous croup by cauterization. In this connection, I gave him my reasons for *not* performing tracheotomy under the circumstances in which he has been accustomed to operate; that, for many years, I had employed cauterization of the larynx in any and every stage of the disease, by means of which others, as well as myself, had saved, I believed, many lives; and that I had come to the conclusion, that if *this* operation failed, it would be useless to employ tracheotomy. He desired me to give him the size, shape, &c. of the instrument I employed, and assured me that he would attempt the operation in the first case of croup that should occur in his practice.

After my return home, during the last year, M. Trousseau obtained, through Prof. T. Childs, of Pittsfield, who was then in Paris, half a dozen of my sponge-probangs, and the bent spatula which I employ for depressing the tongue. A few months since, I received from Dr. Trousseau a very kind letter, and as its statements are conclusive on one point in this matter, I shall take the liberty of giving the concluding portion of it.

* * * “J’ai reçu aussi, et j’ai lu avec une grande attention, votre ouvrage sur la cauterization de l’intérieur du larynx. Avec l’abaisse-langue que vous avez imaginé, et dont M. le Dr. Child m’a donné le modèle, on peut aisément voir l’épiglotte; mais j’éprouve toujours beaucoup de difficulté à pénétrer jusqu’aux cordes vocales. Il y a aussi quelques uns de mes malades qui ont éprouvée des accès de suffocation effrayants, quoique j’eusse agi, suivant vos recommandations, avec une extrême rapidité.

“Au demeurant, grâce à votre excellent abaisse-langue, j’obtiens aujourd’hui, par la medication topique, des succès qui étaient bien plus rares auparavant.

“Agréez, monsieur et honorable confrère, l’assurance de mes sentiments les plus distingués.

“A. TROUSSEAU.”*

* “I have also received, and read with great attention, your work upon the cauterization of the interior of the larynx. With the tongue-spatula which you have invented, and of which Dr. Childs has given me a model, the epiglottis can easily be seen; but I always experience much difficulty in penetrating to the vocal cords. There are, also, some of my patients who have experienced frightful parox-

This *exposé* of the unjust and unprofessional course pursued by Dr. Adams, has been made by me, I confess, with great reluctance. Had Dr. A. confined himself, in his characteristic labors, as he and his coadjutors have done heretofore (for this is by no means the first time—as hundreds of the profession well know—that he and they have consorted together for the professional injury of others), to their own country, and among their own countrymen, I should have suffered these things, for very obvious reasons, as I have done through many years, to pass altogether unnoticed. But “John G. Adams” in Paris, with the honorable suffix to his name of “*ancien Secrétaire de l’Académie de Médecine*,” etc., when he presents himself with his cards of introduction to Trousseau, or Chomel, or Louis, or Robert, is, in their estimation, a different man from *Dr. Adams, of New York*, and possesses power under such circumstances, if disposed, to effect altogether more mischief than at home.

For the honor of American physicians, as well as to protect myself, I have endeavored to expose, and would protest against, these efforts made to interrupt those pleasant relations which have been established between the members of the profession abroad and those of our own country.

A case of Ununited Fracture of the Thigh bone. By G. VOLNEY DORSEY, M. D., of Piqua, Ohio.

Cases of ununited fracture are of rare occurrence in private practice in the West, inasmuch as our patients are generally healthy, or at least free from those taints of the system which are usually supposed to present obstructions to the process of bony union. If the opinion expressed by Mr. Syme be correct, that the principal obstacle to bony union is found in not maintaining perfect immobility of the parts, and continued apposition of the fractured ends of the bone, it is a matter of some surprise that more cases do not occur in country practice, from the very imperfect appliances frequently used for the purposes above mentioned. I have seen several cases of fractured femur, where a single splint on the outside of the limb, with a few very imperfect, short, pasteboard or wooden splints at the point of fracture, were, with

ysms of suffocation, although I operated, according to your recommendations, with great rapidity.

“In conclusion, thanks to your excellent tongue-spatula, I now obtain, by topical medication, successful results, which before were much more rare.

“Accept, sir and honorable *confrere*, the assurance of my most distinguished sentiments.

“A. TROUSSEAU.”

some rather awkwardly applied bandages, the whole means trusted to, for procuring a cure; yet, in all these cases, although there was frequently great deformity of the limb, still bony union did not fail to take place. Indeed, perfect immobility of the parts, although certainly highly necessary, in order to ensure a good limb and produce union in the early stages of a fracture, would yet seem by no means necessary in cases where, from any cause, union at the proper time has failed to take place. We find several cases detailed by Mr. Bowman and Mr. Fergusson, in the London Lancet of 1852, in which the desired union was produced by enclosing the limb in gutta-percha splints, and allowing the patient to move about freely, apparently for the purpose of producing the amount of inflammatory action requisite for a cure. Indeed, whenever this can be produced, and any thing like a proper degree of apposition of the ends of the bone maintained, bony union is almost certain to take place.

Various means have been in use for the production of this necessary inflammation, such as friction, the seton recommended and used by Dr. Physick, and the ivory pegs of Dieffenbach; but the first, wherever it can be used with any prospect of success, is surely the one to be adopted, as much less likely to be followed by unfavorable results to the patient, and doing away with the unfortunate necessity of rendering a fracture compound, by opening the flesh, as is done in both the other methods.

The use of anæsthetics enables us to use friction to any amount that may be deemed needful, without at least any immediate suffering on the part of the patient; and whenever the ends of the bone are free from any softening, healthy and firm, I have no doubt an amount of friction sufficient to produce active inflammation may always be used with impunity. The case I am about to relate, presents some features which I have thought of sufficient interest to render it worthy of being placed before the profession.

On the 26th of November, 1853, I was called to see Miss C. aged 16; who, ten weeks before, had suffered a fracture in the upper third of the femur of the right side. The limb had been set by a respectable practitioner, with the long outside splint of Desault, with a movable shoe and foot-piece attached, now in common use in this State, but without any inside splint, and evidently without sufficient support beneath the limb. From an over-anxiety, too, to have the limb sufficiently long, there was also, perhaps, too frequent motion of the movable shoe, to which was fastened the extension bandage; and this may have had some effect in producing the failure in the union of the bone. Much constitutional irritation and suffering ensued, and, at the end of eight weeks, on removal of the splints, the bone was found still ununited: a starch bandage and some short splints were applied; but the pain, on motion, and the irritation of the limb were still

very great; and, in consequence of these difficulties, two weeks after the removal of the splints, I was desired to examine the case.

Finding the situation of the patient such as above described, I proposed to administer the chloroform, use friction of the ends of the bone, then re-apply the splints and give the bone an opportunity of reunion. This was done on the 27th November; she was brought completely under the influence of the anæsthetic agent—a mixture of chloroform and sulphuric ether—the bones were freely rubbed for ten minutes, then carefully adjusted, and Physick's modification of Desault's splint applied, with a strong splint cloth for supporting the leg.

The night after the bone was set, she complained of considerable pain in the head, but made very little complaint of the limb or of any of the bandages. Cold applications were used for the purpose of relief, and some anodynes were administered, and the bowels were freely opened; still the pain continued to increase, and, finally, strong spasms supervened, which were constantly repeated for several hours. They were tetanic in character, of the opisthotonic variety, and were finally arrested only by the administration of chloroform by inhalation, as before, after which they immediately subsided and did not manifest any strong disposition to recurrence. A blister to the back of the neck seemed to remove all cerebral difficulty; and the case progressed as favorably as could be expected in a patient suffering much from abrasions of the skin, consequent on her protracted confinement. No further symptoms of constitutional irritation were presented; and after seven weeks, when the splints were removed, the union of the bone was found to be complete. The limb is only three fourths of an inch too short.

In considering the progress and ultimate result of this case, two questions of considerable interest present themselves for our examination. First, why did union of the bone fail to take place after the first adjustment of the limb, in a healthy patient, and when the degree of immobility maintained by the apparatus used, would seem to have been sufficient for that end? Did the fever and irritation which supervened in the progress of the case arise from want of proper adjustment and sufficient immobility of the parts; or were they the consequence of some other constitutional cause, and, thus produced, prevented the desired union? Not having seen the patient in the progress of the first ten weeks, I am unable to answer these questions satisfactorily to my own mind; but they are certainly worthy to be taken into account, before casting any censure upon those who had charge of the case during this period. Second, were the spasms which followed the setting of the limb the second time, the consequence of the amount of chloroform introduced into the system (about $1\frac{1}{2}$ oz. of a mixture composed of chloroform one part, sulphuric ether two parts); or were they the consequence of the nervous irritation produced by the violent friction of the ends

of the bone, or by the pressure of the splints and bandages? They do not seem to me to have arisen from the inhalation of an excess of chloroform, inasmuch as the re-application of that agent caused their cessation, and prevented their return; nor would they seem to have been owing to any undue pressure of the dressings applied, as I caused these to be freely loosened on the first appearance of spasms, without, however, the least relief. Hence, I can only attribute their appearance to the great nervous irritation produced by the severe friction of the ends of the bone, to the pain of which, it is true, the patient was at the time insensible, so far as any outward manifestations could determine, but which might nevertheless produce its full effect on the spinal marrow, and even on the brain, and continue this effect after the withdrawal of the anæsthetic agent and the return of these parts to their normal state.

This view opens some important considerations on the use of anæsthetics; for if the return of sensibility renders the nervous system liable to suffer evil effects from pain produced when in an insensible state, it becomes a matter of great importance carefully to consider the amount of pain to which patients are subjected while in this state, knowing that, although present suffering may be averted, still subsequent evil may, and probably will, result almost as readily as if this suffering had not been avoided.

Anæsthetic agents become, then, valuable to us, as removing immediate suffering during painful operations, and consequently doing away with much of the mental shock and apprehension which the fear of pain always induces; but they cannot secure the system against the consequences which, in all cases, are liable to arise from the infliction of severe suffering.

Report of a Committee of the New York Academy of Medicine on the Medical and Surgical Aspects of the Crystal Palace: Presented Feb. 1st, 1854. (Published by permission of the Academy.)

The Committee appointed by the Academy of Medicine to visit the Crystal Palace of this city, and to report upon any thing therein contained of peculiar interest to the medical profession, having assiduously and thoroughly attended to the duty confided to them, now respectfully beg leave to report—

That at a meeting called at the house of Dr. Gardner, Nov. 25th, on motion of Dr. Van Kleek, seconded by Dr. Batchelder, Dr. Gardner was chosen Chairman, and Dr. Garish, Secretary, and that, subsequently, the Committee have held frequent meetings.

That, in their investigations, they were met by the prompt co-operation of the management of the Crystal Palace, through J. M. Batchelder, Esq.,

who not only furnished the members of the Committee, but also the President and Secretary of the Academy, with season tickets of admission, and, what was of more direct advantage, gave them permission to open cases and to carefully examine their contents. In this respect, it is proper to state that they were willingly seconded by the owners or agents of the separate articles exhibited. Most particularly the Committee are indebted to the attention of M. Luer, as well for his explanation of his own unsurpassed collection, as for his zeal in exhibiting the instruments of other German and French manufacturers, rivals at home and competitors here for the palm of superiority.

Your Committee, in the following report, will mention such articles only as appeared to them peculiarly deserving of notice as new inventions, as new modifications of old instruments, as specimens of excellent workmanship, as of unusual adaptation to the purpose intended, as examples of obsolete instruments, or which, for any reason, seem worthy of consideration.

The Committee first visited the case of Mons. Luer, of Paris; and the following articles are described as shown by the proprietor, fabricator, and frequent inventor of its numerous instruments.

Nov. 29th. Instruments used for the various *operations upon the eye*, invented by Luer. One for seizing the capsule of the lens, penetrating the cornea as a simple cataract needle, and then, by pressing upon a spring in the handle, the point of the needle was converted into a hook, enabling the capsular ligament to be easily seized; then, relaxing the spring, the needle shape was restored, but still maintaining its hold upon the capsule, they were easily withdrawn together. One invented by Lagiere, of Paris, for removing the whole of a soft cataract, called a *suction needle*. It is in the form and of the size of a gold pencil-case, hollow, containing a piston in its cavity moved by a spring. Upon one extremity is a perforated needle, resembling an ordinary cataract needle, which, when passed through the cornea and entered into the anterior chamber of the eye, by a graduated pressure upon the spring, will cause the fluid to recede from the eye and enter into the barrel of the instrument, thus completely removing a soft cataract.

These two instruments were considered by the Committee to be the most ingenious and, probably, practical instruments of recent invention in this department. M. Luer exhibited numerous others of most beautiful workmanship and utility; but as most of them have been made known some years to the profession, we only allude to them in order to express the high estimation which the Committee have for the ingenuity of the inventor, M. Luer, himself, and their appreciation of the great perfection to which the manufacture of these delicate instruments has been brought under his personal superintendence.

As tests of the "temper" of the instruments, Mons. Luer, taking a cataract needle, cutting kid smoothly, piercing it without fracture, then cut out pieces from the bone handles of instruments, bending it freely also, sticking the point into the bone so firmly as to sustain its weight; then, on using it as at first, the edge and point were seen to be uninjured. Cataract knives, after whittling brass and bone, were uninjured.

The Committee then examined an instrument, invented by M. Luer, to be used in passing liquids through the nose into the stomach. It is a jointed stylet, intended to be passed into a flexible stomach tube, and then, by a pressure upon the handle, the end is curved at pleasure, and made to pass without difficulty down the œsophagus. The stylet is then to be removed, leaving the tube.

An urethral dilator, consisting of two pieces, enlarging by means of a screw in the handle.

A new needle, for tying deep-seated arteries.

A very ingenious instrument, if of practical use, for seizing and removing sticks, ends of bougie, and like substances, from the bladder. The article being first seized by the forceps extremity, by the process of withdrawal is directed into a line with the instrument, and, if not large, concealed within the instrument, and thus withdrawn.

A collection of small silver forceps (*serre-fine*), about $\frac{1}{2}$ inch in length, with sharp points, intended to retain cut edges in co-aptation, and thus to dispense with stitches, to be used in operations for hair lip, wounds, &c. (Mr. Marjolin lately presented a case of entropion to the Surgical Society of Paris. The patient had been affected with inversion of the lower right lid. After getting rid of the inflammation, M. Marjolin simply pinched up a transverse fold of the integument of the lid, and secured it with a *serre-fine*. The instrument fell off in a fortnight, leaving no trace of the entropion. Vide article in No. 28 Braithwaite, from the Association Journal, descriptive of the operation, its success, &c.)

Polypus forceps, having a groove in the extremity, and ratchet spring in the handle, for compression.

Small clamps, for preventing hæmorrhage during operations upon the lips, tongue, or similar places. The portion intended to be operated upon is to be encircled within a ring, which, making pressure all around, leaves the centre free from blood.

Speculum oris, capable of dilation. This instrument is to be passed into the mouth, where it is easily fixed, compressing the tongue, showing the whole fauces, and allowing an œsophagus tube to be used, or any local applications made.

A tube used in laryngotomy, particularly applicable in operations for

epilepsy. This instrument, by means of valves, enables one to speak without difficulty. Very ingenious and useful.

A set of spring forceps, invented by Desgranges, Senior Surgeon of the Hotel Dieu, of Lyons, for curing prolapsus uteri, intended to diminish the caliber of the vagina; and the method of operating is to seize the mucous coat of the vagina in various places, and forming it into folds; then leaving it thus restrained by the forceps, till inflammation and cicatrization contracted the vagina permanently.

An hæmorrhoidal compressor, by Amussat—grooved forceps; into these grooves, nit. argent. is to be placed, and then allowed to remain applied to the hæmorrhoids for twenty-four hours. This instrument has recently been improved upon by Jobert; *vide* cases reported and translated from the Gazette Médicale into the Charleston Med. Journal, for January, 1854.

Mechanical leech, by Horteloup. The cut is made by merely pulling a string, making a circular cut to any required depth, and with little pain or shock; and a suction was produced by a glass tube and india-rubber valves, moved by a screw, and perfectly controllable.

A breast-pump, with graduated pressure; a glass tube on which was a piston moved by a screw.

An obstetric forceps, by Van Hivel, of Brussels. In the inside of each blade was a groove, through which ran strips of iron, to be forced upwards by a screw. At the end of each of these strips of iron was an orifice through which ran a chain saw, to be moved below.

This was intended to saw through the head longitudinally, and thus to diminish its size. The instrument is exceedingly complicated, and much time would be necessary for its application, if practicable. It is, however, very ingenious and curious.

Obstetric perforator, by Van Hivel, consisting of one blade, through the end of which a sharp knife might at pleasure be protruded, by means of a screw in the handle.

Instruments for staphyloraphy, intended to sew the cut edges together, invented by Sotelaux, of Strasburg. One was a long probe, upon the end of which was a needle; this, when armed, is to be passed through the palate, and to be received into a ring spatula covered with buck-skin, placed behind the palate. The needle is then retained, and easily seized. This spatula also steadies the palate, rendering it much more easily pierced.

Instrument for compression in cases of aneurism, invented by M. Luer. This is a species of tourniquet, consisting of a pad-shaped wood, with a notched, brass top, to which is attached a strap passing around the leg. It is stated that with this instrument the vessels of the leg are not compressed, and the circulation affected only where the pad presses.

A small spring for raising the edge of the inverted toe-nail, either upon

one or both sides, is ingenious, and perhaps practically useful. Invented by M. Luer.

A very small enema case. The instrument is of india-rubber principally, consisting of a bag, pipe, &c. It is ingenious and useful.

A staphyloraphy needle was exceedingly ingenious, and of value if practically useful. It had a curved extremity, which was passed behind the part to be united, by a slide in the handle; an armed needle was passed through the edge, and the thread caught upon the portion behind. By a similar process the needle was passed through the other side, and thread could then be easily tied.

A double gouge forceps, by Luer, for cutting bone without breaking—making a clean cut—a valuable instrument.

A modification of Lallemand's lithotrypsic instruments, modified and improved by Luer, increasing their power and convenience.

A great variety of instruments for scarifying the prostate gland by means of concealed blades.

Galvanic catheters—the catheter of copper with zinc stylets, for spasmodic stricture.

A double knife for making microscopic sections of any desired thickness—an exceedingly useful instrument.

A bistoury for hernia—consisting of a concealed blade presenting no cutting edge, even upon firm pressure—thus enabling it to be introduced as desired, without danger—and so constructed that by turning a screw in the handle, the blade is then exposed.

A pair of scissors, composed of two long, straight bistouries, capable of being separated into single instruments; united as ordinary scissors, or with the cutting edges external so that they may be introduced into a cut made for any purpose, as in lithotomy for example, and then opened and withdrawn, making thus an extensive cut.

Ring compressor, for arresting hæmorrhage, when operating upon the lips or eye-lids. The part to be operated upon is to be included within the ring, which is screwed down upon a plate below, thus obstructing the circulation in the part.

A modification of Simpson's uterine supporter, by Luer, consisting of the addition of an india-rubber cushion, for the os uteri to rest upon, and ivory stem, in one case; and in another, of the same rubber cushion, as a rest, and a brass stem to enter the os. This is thus made from an idea that, by the corrosion of the metal, the ulcerations within the cavity would be stimulated and cauterized, and a cure effected.

A modification of Simpson's sound, by the addition of a sliding button marking the depth to which it had been introduced into the uterus,—also,

as adding to its convenience, the handle being constructed so that the sound might be passed into it, and the instrument shortened.

A pair of obstetric forceps, invented by M. Luer, permitted either blade to be applied first, locking in this manner with equal facility—the two blades being brought into the same axis by means of a slight rotation effected in the handle of one blade, and without detracting from its strength. The advantage of this instrument was such, that in case of an unequal application of the two blades upon the head of the child, and thus preventing their locking, instead of removing one or both blades, as with ordinary forceps, the handle of the upper blade could be passed underneath, and could there, perhaps, be easily locked.

The committee next visited the case of instruments fabricated by Wünsche, of Leipsic. The contents of this case were much injured by rust, probably caused by accident in the transportation. They were generally of rude manufacture, contrasting markedly with the beautifully finished specimens from France and Denmark. With few exceptions, the instruments were of a date at least a half-century anterior to the present time. The instruments, generally, were noticeable for their antique appearance. One or two claimed attention for their originality. The first was denominated an obstetric trephine. This was an ordinary trephine, with a handle about a foot long, all contained in a simple brass tube. The intention of this instrument was, that it should be passed into the vagina and firmly pressed upon the presenting skull—the tube guarding the mother from injury; and then the trephine could be used in the customary manner. An opening being thus made in the skull, a head tractor came into play. This instrument consisted of a brass tube, similar to the one above described, capable of being passed into the opening thus made; and, by means of a screw in the handle, three strong claws were protruded within the cranium, forming right angles to the handle of the tractor, and being thus within the skull, enabled strong traction to be made upon the head. At a subsequent period this instrument might be used, in some degree, as a pair of craniotomy forceps, and portions of bone might be seized by it. These instruments were invented by Kiwisch, and are more noticeable for their ingenuity than apparent utility.

An osteotome invented by Heiner, of Wirtzburg, Bavaria, consisting of an endless chain saw, worked by a crank handle, by far the most ingenious instrument, and of the best workmanship, in this collection.

A collection of papier maché models, made by the Association of Industry, in Nuremburg, Bavaria, were very fine imitations of nature.

To the very large case of Charriere, of Paris, the Committee had complete and thorough access; but, owing to the absence of any capable person

interested to exhibit the various instruments, your Committee may have inadvertently overlooked some specimens of novelty and merit.

A large collection of the various forms of speculi, among which nothing new was observable. Some of these were electrotyped with gold. The advantage of this is their freedom from rust and stain; their marked disadvantage, that of diminution of light, and the altered color given to the parts by the reflection from the yellow metal.

An obstetric forceps, by Bernard, of Paris. This instrument was exceedingly ingenious. In shape of an ordinary character, the blades might be fastened together in almost any situation, when the handles were brought sufficiently near together, by means of a link with a ball-and-socket joint, dependent upon the lower portion of the neck of the blade; when the blades were brought together in the usual position, another hinge fastening above retained them in that position, but allowing a slight movement which gave a latitude of perhaps an inch at the end of the blades.

A beautiful instrument was an inhaler, for vapors and the steam from herbs, &c.; an oiled silk fitting accurately over the face, attached to a spirit-lamp and cup.

A pair of obstetric forceps, with a hinge in the handle, permitting it to be folded up, and thus rendered more portable; in other respects, this instrument was the ordinary French forceps.

An india-rubber hæmorrhoidal cushion, consisting of a pad to be placed upon the anus, from which proceeded a stem of the same material, about an inch in length, intended to be passed into the rectum, and supporting the hæmorrhoids, the whole to be kept in place by a strap encircling the body. This instrument is also serviceable in cases of prolapsus ani.

During the last of December, a case of instruments was entered at the Crystal Palace, from the manufactory of C. Nyrop, formerly an apprentice of M. Luer, of Copenhagen, Denmark. These instruments were of fine workmanship, comparing favorably in that respect with the best on exhibition. A general recommendation was their moderate price. Among those peculiarly worthy of notice were the following:

A rotation saw invented by Nyrop. The peculiarity of this instrument was its facility of being moved in various directions by means of a ball-and-socket joint, somewhat restrained in its action; its capability of being used by the hand, or by means of a brace, like the ordinary French trephine; and still more in the saw itself, which consists of a double circular saw (with perpendicular teeth) turning in opposite directions, and not only cutting more rapidly than with a single saw, but steadying it in its application. This appears to be superior to any similar instrument in the Exhibition.

A pair of obstetric forceps, invented by Prof. Levry, of Copenhagen,

were noticeable for the ingenious manner in which a hinge was inserted in the neck of each blade (and its fastening, also), for convenience in carrying.

A compressorium nasi, invented by Larsen, consisted of tubes passing into each nostril, and plates pressing upon the outside of the nose, both arising from a band which passed over the upper lip, and regulated by screws, intended to retain the nasal bones in their proper situation, when dislocated or fractured.

A vaccination case, invented by Drejer, neat and compact, contained knives adapted to this purpose ; cases, &c. for keeping scabs or lymph from the air.

Several orthopædic apparatus, invented by Boch, and constructed by Nyrop, were particularly deserving of notice, not only for their beauty of finish, but for their apparent utility in torto-collis, deformities of the back, &c. If their real value is at all in proportion to their mechanical ingenuity, they are eminently worthy the attention of those engaged in this department of surgery.

A truss for umbilical hernia, is noteworthy.

A clyster pump, is of simple construction and reduced price.

A pair of ear forceps, invented by Prof. Larsen, are delicate and probably serviceable.

A knot-binder, invented by Larsen, for tying ligatures upon deep-seated arteries, appears of utility.

A double cataract knife, one blade sliding upon another, was noted as perhaps of practical use.

An exploring needle. This instrument consisted of a grooved needle, which, after being plunged into a tumor, was covered with a sliding blade, which prevented the matter within the groove from being wiped away, or mixed with other fluids while withdrawing it.

In a case of india-rubber articles exhibited by Vernant Cabante, of France, with no name of maker given, the following instruments were found. Several uterine supporters, which were constructed in the shape of a bag, with a tube of the same material attached. They are to be introduced into the vagina, then inflated by means of a similar bag to be applied to the tube, which is then closed by a stop-cock, and left *in situ*. A double cap for the head, with two openings for hose, through which continuous currents of hot or cold water might be passed.

Stockings for swelled legs, varicose veins, &c.; the india-rubber made to run spirally.

Fracture apparatus for producing extension and counter-extension.

Pad and straps to pass round the body, for umbilical hernia of children.

Your Committee carefully examined all of the medicines, chemicals, &c., and have thought the following worthy of the attention of the Academy :

Specimens of ergotine, by Bonjean, of Chamberry, Sardinia.

The resinous extract of ergot, by Parodi, physician of Piedmont.

Citric acid and nut oils of various sorts, by the same exhibitor.

Blancard's pill of the ioduret of iron, not liable to decomposition.

Essences of cogniac and rum; oil of valerian; oil of calamus; oil of chamomile (*anthemis nobilis*), by Spolen and Schimmel, of Germany.

Aluminate of iron, by Hermann, of Germany.

Extract of asparagus, caffeine, and theine, by Merch, of Germany.

Essence of cucumber, powdered extract of cucumber, powdered belladonna, aconite, conium, hyoscyamus, digitalis, lactuca virosa, of great beauty, by Gehe & Co., of Dresden.

Most beautiful specimens of chemicals, by Powers & Weightman, of Philadelphia, the finest in the exhibition. Arseniate of quinine, a new and valuable addition to the Pharmacopœia; bisulphate of quinine, iodate of quinine, caffeine, theine.

A set of tin splints for all fractures, by Dr. Kerr, of Canada, which was noticeable for its ingenuity and its unusual shapes.

Daguerreotype representations of the vaccine sore, at different periods and at various removes from the cow.

Committee.	{	AUGUSTUS K. GARDNER, <i>Chairman.</i>
		JOHN P. GARRISH, <i>Secretary.</i>
		J. P. BATCHELDER,
		ISAAC GREENE,
		RICHD. S. KISSAM,
		JNO. R. VAN KLEEK.

Polypus Uteri and Eclecticism. By O. C. GIBBS, M. D., of Perry, Lake Co., Ohio.

Dec. 20th, 1850. I was called to see Miss Smith, aged 35 years. I found her very much emaciated, anæmic, her nervous system very much shattered, complaining of frequent, profuse uterine hæmorrhage, headache, palpitation, weight in the pelvis, pain in the back, dragging sensation about the loins, &c.

On inquiry, I found a digital examination had been frequently made by another practitioner; and, hence, resorted to the same means of information without hesitancy. A polypus was found attached to the fundus uteri, of the size of a large pear. Removal by ligature was determined upon; consequently, on the 22d, by the means of a double-barrel canula and bonnet wire, the polypus was ligated.

It may be well to say here, that bonnet-wire is probably equal to any

other ligature, and preferable to many, in consequence of the ease with which it is applied and tightened.

Every second day, the vagina was washed with tepid injections, and the ligature tightened by turning the canula, which twisted the wire upon itself, and consequently lessened the caliber of the ligating portion of the wire. On the sixth day after ligating, the canula was found loose in the vagina, and the polypus, considerably reduced in size, was removed by the aid of the fingers.

This case is interesting from its previous history, and lengthy treatment at the hands of one of those ignorant pretenders who, with the pleasing cognomen of "Eclectic," tamper with the lives of their fellow-men, and pocket complacently the golden rewards of their worse than useless medication; decrying that knowledge and skill that might save their patient from suffering and death, while in the darkness of ignorance they are aggravating the former and inviting the latter.

This patient had been under treatment for more than two years, for the above-mentioned symptoms. Digital examinations had been made without number; medicines of complex compounding had been given without stint; opium, to relieve pain, had been largely and perseveringly ordered, until the nervous system had severely suffered. Pessaries, of different forms and composition, had been forced into the vagina, with the ostensible object of holding the uterus in position. Uterine and abdominal supporters, of various patents, had been perseveringly worn, with the same plausible design. But all without avail; the symptoms would persevere in spite of this multifarious medication. An error in diagnosis, which nothing but the most consummate ignorance could have made, was fatal to success. How this case would have terminated, the reader can easily imagine.

Want of skill and success was by no means met by a want of confidence; for the patient and her friends were perfectly satisfied, and any insinuations reflecting upon their adviser's deficiency of medical knowledge, would have been met with contempt. I was sent for only because their favorite quack, for a few days was not to be had. On his return, at one of my visits, I found him with the patient; and, from his conversation, I am certain he was ignorant of the nature or pathological significance of polypus, and was not sufficiently acquainted with his mother-tongue to know the definition of a ligature! Yet he was doing quite an extensive business, and, in addition, was officiating as a justice of the peace. My patient admitted he did not fully understand her case, but she verily believed he was capable of understanding every other. When pretenders are capable of such a hold upon individual confidence, their reputation is alike independent of success or failure,—of judicious or pernicious medication. Hence, the impossibility of quack extermination is readily apparent.

Obstetric Memoranda. By B. FORDYCE BARKER, M. D.

I propose, from time to time to give our readers a condensed view of all that is new and valuable in connection with midwifery, and the diseases of women. I shall in this article, briefly allude to some of the more important papers which have appeared in foreign and domestic journals on these subjects, during the last year.

On the Induction of Premature Labour.

The propriety of exciting the gravid uterus to prematurely expel its contents, is at the present day no longer questioned in those cases where the life of the mother is jeopardized by the continuance of the function of gestation, and in certain cases where there is a chance of preserving the life of the foetus by so doing, which would be impossible, from mechanical causes, at full term. The methods by which this has been effected are, puncturing the membranes, separating the membranes from the os and cervix uteri, dilatation of the os uteri by sponge tents, and the administration of ergot.

In the January No. of the "Medical Times and Gazette," Dr. Francis H. Ramsbotham, of London, gives a table of fifty-five cases in which the ergot was given for this purpose, and another of thirty-six where labour was induced by puncturing the membranes. Dr. R. believes that no means yet devised, is of such easy application and is liable to so few objections, as the use of ergot. But we believe that an analysis of his tables will hardly lead to the same conclusions in the minds of others. That ergot will induce uterine action, is, however, clearly established. But in some cases it was necessary to repeat it in full doses very many times, before any effect was produced. Many of the patients took more than twenty full doses, at intervals of four or six hours, before the effect was obtained. One took forty-eight and another sixty doses. In eight cases, the ergot failed to exert its specific influence on the uterus. The table also demonstrates that the ergot in some instances has a prejudicial influence on the foetus in utero. Of the thirty-three children born alive, five died in convulsions speedily after birth. In many of the twenty-two cases of still-births, the mothers declared that they were quite sensible of the moment when the foetus within them ceased to exist. Dr. R. believes it is a universal principle, that whenever it fails to produce uterine contractions, it is equally innocent of any deleterious effects on the economy of the foetus.

Professor Kiwisch of Wurzburg, proposed the use of the warm uterine douche. A gallon or two of warm water of a temperature from 96° to 116° is injected continuously upon the os uteri, twice a day. In some cases

two or three douches suffice to induce actual labour pains. In other cases, where the excitability is less, six or eight douches were required. Dr. Tyler Smith, has reported a case in which he successfully resorted to the alternation of the hot and cold douche, by means of a syphon. I have had occasion to recommend the premature excitement of uterine contraction in three cases. In one case at the twenty-second week, on account of the excessive and constant nausea and vomiting; in the second case, at the fourth month, from the intense suffering and danger resulting from the development of the uterus chronically inflamed; and in the third, at the thirtieth week. This patient had complete amaurosis, succeeding eclampsia. When I saw her she had been perfectly blind for a week. The urine was deficient in quantity, and highly albuminous, and she was extremely anæmic. In these cases the injection of a large quantity of cold water into the vagina, repeated every three or four hours, was sufficient to induce uterine contractions. In one case, labour came on the second day (they were allowed to rest undisturbed during the night); in the other two, it came on the third day. Scandoni, of Wurzburg, has induced premature labor by irritating the nerves of the mammary glands, by means of the breast-pump.

In the Nashville Journal of Medicine and Surgery, Dr. Washington asserts that dry cupping, applied to the lowest part of the sacrum, produces dilatation of the os uteri, and applied higher up, contraction of the uterus. In a case where the pains had endured fourteen hours, without producing any perceptible effect, in consequence of rigidity of the os uteri, Dr. Washington applied a dry cup as low down on the sacrum as possible, so as to cover the origin of the nerves to the os uteri. Complete relaxation ensued; at the next pain, the head descended to the outlet, and with the second pain the patient was safely delivered, and that in less than ten minutes from the application of the cups. We are not aware that this method has ever been tried for the induction of premature labor. In conclusion, I should say that as a rule of practice, the douche should be preferred in those cases, 1st, where the operation is necessary in the early months, on account of excessive vomiting, occurring to such an extent as to threaten life by starvation and debility; 2, in those cases where the operation is necessary in the latter months, in order to save the child, on account of some mechanical obstacle to delivery at the full term. But in those cases where the operation is necessary in the latter months, in order to save the life of the mother, on account of dangerous oppression of the circulation or respiration, or excessive vomiting, or draining hæmorrhage from partial separation of the placenta, or from insanity or convulsions, puncturing the membranes is to be preferred, as the evacuation of the liquor amnii frequently affords immediate relief. The only objection which has been urged against the douche

as a means of inducing premature labor, is the facility, certainty, and safety with which it could be made use of for criminal purposes, were it generally known to the public.

Prof. Simpson has published a very interesting paper on "*Morbid deficiency and morbid excess in the involution of the uterus after delivery.*" The physiological development of the uterus during the nine short months of pregnancy is forcibly stated in the following language: "During the forty weeks of utero-gestation, the uterus enlarges from nearly 3 inches in length and $1\frac{3}{4}$ of an inch in breadth, to 12 or 15 inches in length and 9 or 10 inches in breadth. It increases from about 2 ounces in weight to 25 or 30 ounces. The cavity of the uterus before impregnation is less than one cubic inch; while at the full term of pregnancy it is extended to above 400 cubic inches; and the surface of the organ increases from about 5 or 6 square inches to nearly 350 square inches. Before impregnation, the uterine cavity would not hold above a drachm or two of fluid; at the ninth month of utero-gestation, its contents usually weigh from 120 to 150 ounces."

While forty weeks are requisite for the full development of this condition, from four to eight weeks usually suffice to decrease this organ to its normal, unimpregnated condition. Professor Retzius, of Stockholm, has found, in a series of anatomical and histological observations on this subject, that the process of absorption of the walls of the puerperal uterus is preceded, as absorption of other deposits is, by fatty transformation of its component fibres; and that the blood, during puerperal convalescence, shows under the microscope a corresponding superabundance of globules or granules of fat. But in some cases, there are various pathological derangements which retard the uterus in regaining its normal dimensions. Most practitioners must have met with cases which Prof. Simpson describes as "morbid permanence of the state of puerperal hypertrophy." But he is the first to describe an opposite condition of the uterus, following pregnancy, viz., permanent atrophy producing amenorrhæa.

Inversio uteri.—In the Buffalo Medical Journal (Nov., 1853), appended to the report of a case of this serious and alarming accident, Dr. Hunt gives an analysis of sixty-seven cases, which have been recorded. Dr. Hunt's paper is a valuable contribution, its only defect being, in our judgment, a neglect to give the sources from whence he obtained these sixty-seven cases. It has been a mooted question, whether, in those cases where the placenta is adherent, the uterus should be replaced with the placenta still attached, or whether it should be first detached, and then the uterus reduced. As Dr. Hunt remarks, the weight of authority is in favor of the former method of procedure, the argument adduced in its favor being the danger of

increased hæmorrhage attendant on the removal of the after-birth. But Dr. H. urges the following reasons for first detaching the placenta :

First. The attempt to return the placenta very much increases the difficulty of reposition. *Second.* When successful, it leaves a formidable difficulty to be still encountered. *Third.* It does not decrease the danger of hæmorrhage. Of these sixty-seven cases, thirteen terminated in death. In four, death occurred *before* reposition. Three of these died from hæmorrhage, and one from nervous exhaustion with slight hæmorrhage. Four deaths occurred immediately *after* reduction. One from hæmorrhage; the placenta having been returned with the uterus. Three died from convulsions. The remaining five deaths were in chronic cases. Thirty-two of these cases were irreducible; ten of these resulted in spontaneous cure. In five of these cases, gangrene occurred, and "singularly enough, all of these cases resulted in what may be called a cure; that is, the cases recovered from this amputation by natural process, and regained a comfortable general health." Dr. Hunt found no cases which were fatal from gangrene. Five of these cases were cured by spontaneous reposition of the organ. In four cases, ligation was successfully performed. Six were "extirpated" successfully. Four cases of ligation were fatal. Of the termination of the remaining eight there is no record, except that two are quoted as in comfortable health years after the accident.

Dr. Hunt sums up the causes of inversion, its treatment, and its terminations, in the following propositions :

"The liability to inversion decreases, but not to any marked degree, with the number of children which the woman has borne.

"That no one cause can be assigned as universal; but that the complication of a short funis with a rapid labor, the erect posture when delivered, and a large quantity of amniotic fluid, are the conditions most frequently present as causes.

"Inversion may occur without neglect or undue interference on the part of the accoucheur.

"The placenta is adherent in a large proportion of cases.

"When adherent, it should be removed prior to any attempt to reduce the inversion.

"Such removal of the placenta does not increase, but rather decreases, the risk of hæmorrhage, while it retards and renders difficult the reduction.

"Hæmorrhage does not occur to any more fatal extent than does convulsion or syncope.

"All cases in which convulsion occurred were fatal. There is little danger of metritis occurring after reduction.

"Reduction increases in difficulty with the length of time which elapses

before it is attempted. Partial inversion is less easily detected, but more readily reduced, than complete.

"No operation for extirpation should be resorted to until it is evident that life is endangered.

"A sufficient number of cases occur, in which either gradual diminution in the size of the organ or spontaneous reposition occur, to justify and demand a delay of any operation for extirpation, until it is urgently called for by the imminent danger of the patient.

"The operation by ligature involves less danger than that by excision, and is therefore preferable to it.

"An operation is more frequently necessary in partial than complete inversion, and is at the same time less dangerous.

"Finally, under judicious local and general treatment an inverted uterus may often exist, for many years, without great loss of locomotion or of usefulness, and with a comfortable degree of general health."

In our cotemporary, the "New York Journal of Medicine," Dr. Elisha Harris, of this city, has published a capital paper on the "*Pathology of the cervix uteri in those conditions attended with leucorrhœal discharges.*" Although we could hardly endorse all the views and opinions of Dr. Harris, we could almost recommend his paper as a model for a "Report on acute and chronic diseases of the neck of the uterus." We most heartily concur with the following conclusions of his paper :

"Leucorrhœa is a prominent and a very constant *symptom* of local congestive and inflammatory affections of the uterine organs, especially of the os and cervix uteri, attended more or less constantly by structural lesions, and by important constitutional complications of which the local affections may be either resultant or causative.

2. "That, whatever may be the anatomico-pathological lesions and whatever the constitutional complications in cases of leucorrhœa, the most common and the most important seat of the leucorrhœal discharge is in the highly vascular, glandular structure of the canal of the cervix uteri.

3. "That from the extensive and all-controlling sympathetic relations of the uterine organs, it is found that any morbid changes in these organs, whether primary or secondary, re-act unfavorably, and with great certainty, upon the general health, especially upon the digestive organs and the nervous system ; and, *mutatis mutandis*, the same principle holds true of primarily unhealthy conditions of the nervous system, the digestive, etc., as causative of uterine disease.

4. "And consequently, that in the curative treatment of any affection that is complicated with any forms of uterine disease, it is indispensably necessary to attend to the constitutional relations of such disease, while it is

equally important to address suitable remedial agencies directly to the local alterations or lesions of the uterine organs.

5. "That the most extensive and reliable experience of the medical profession has demonstrated the utility and essential importance of attending to the local as well as the constitutional treatment of those diseases of females attended by discharges; and that to do this properly and efficiently, the highest interests of the patient demand the appropriate use of dioptric, instrumental examinations of the seat and nature of the local lesions."

Prof. Shanks of Memphis has published in the "Medical Recorder," a series of excellent practical articles, "*On the Relations of Uterine and Constitutional Disorders as Cause and Effect.*" (Will Prof. S. please read his proofs?) There are no salient points which we can select for extract, but we hope to see these papers collected in a small volume. We think their usefulness should not be limited to the circulation of any medical journal.

In the February number of this journal Dr. Sims relates a case of vesico-vaginal fistula, in which the fundus was retroverted, and the os tincæ was thrown forward under the arch of the pubis, opening into the cavity of the bladder. The cure was effected by closing up the fistula in the bladder with the os uteri.

Dr. Sims regarded this case as perfectly unique, at the time the article referred to was written; but since that time he has met with another case precisely of the same character. The patient, aged forty-one years, was confined with her first child two years ago, and was in labor forty-eight hours. She was sent from the country to Dr. Mott; and, through his courtesy, the case was turned over to Dr. Sims. In presence of Dr. Mott, the operation was performed, Jan. 10th, 1854. She lay in bed fourteen days, and then got up perfectly well. Four days later, that is, eighteen days after the operation, the menses appeared. The menstrual discharge passed into the bladder, mingled with the water, and passed off as bloody urine, without any inconvenience at all. We had the pleasure of examining this patient, Feb. 12th, and found the fistula perfectly cured.

We regard these cases as among the most brilliant achievements of conservative surgery; and in other countries they would secure for their talented author a brilliant professional success and merited honors.

Cancer of the Lower Lip, extending to the Commissures,—Removal—Restoration of the entire Lower Lip. By J. M. CARNOCHAN, M. D., Professor of Surgery in the New York Medical College; Chief Surgeon to the State Emigrants' Hospital, &c. [Two cases, with plates.]

The lower lip is frequently the seat of cancer, which, if not occupying more than one half of the lip, can be treated, so as to avoid future deformity, by the ancient method of removing the diseased part by an incision in shape of a V, and uniting the bleeding edges thus resulting, by interrupted or twisted suture. When the disease, however, has seized upon two-thirds or the whole of the lip, the necessary operation becomes more complicated; and different autoplasmic procedures have been brought into vogue, in order that the edges of the incisions might be properly joined, and the resulting deformity and inconveniences obviated or entirely masked. The Indian and Italian methods of autoplasty are rarely selected to restore loss of substance of the lower lip. Modifications of the Celsian method are usually adopted, the reparation being made by dissecting and prolonging the tissues of the lip or of the cheeks, or by making use of those of the chin or of the neck. By making use of the tissues of the cheek, the new lip would be susceptible of movement, being composed partly of muscular tissue, and would also be lined by mucous membrane, advantages which do not attend the operation when the loss of the lip is repaired by the tissues from the chin and neck, after the method of Chopart.

When the whole lip is involved, Mr. Syme has devised a proceeding which removes the whole of the morbid part in a triangular form, by two incisions made from the angles of the mouth, so as to meet at the chin. From the point where these two incisions meet, two other incisions are made downwards and outwards on each side, and then with a slight curve outwards and upwards. The flaps thus fashioned are next detached from their subjacent connections, and raised upwards, so as to be on a level with the original lip; and the respective surfaces are then retained in contact by twisted suture. This plan is ingenious, but its defect is similar to that of Chopart, the new lip being constituted partly by thin and immoveable tissues borrowed from the upper part of the neck.

In the cases related below, I adopted the method of removing the cancerous part by an incision on each side, beginning at the commissures of the mouth and meeting at the chin. The angles of the mouth were then prolonged by incisions on each cheek, running transversely towards a point a little below the lobe of the ear. The triangular flaps thus resulting were detached. The bleeding edges, forming the sides of the triangular loss of substance, were then brought together on the median line by points of

suture, the free border of the new lip being formed at the expense of the cheek, as a consequence of the transverse incision. From the satisfactory results which followed this mode of proceeding, whenever the cancerous degenerescence does not extend beyond the labial commissures, I should invariably give it the preference.

Case 1. E. Connor, aged 69 years, laborer, married, bilio-nervous temperament, in feeble health, with a cancer of the lower lip, applied to me for advice in the month of November last. Until attacked with this malady, he had always enjoyed good health, had been accustomed to good food, and to working out of doors. He has never had any venereal affection, nor any manifestation of strumous disease. His father, who lived to the age of 90, and his mother, who lived to the age of 63 years, were free from cancerous disease. He has had brothers and sisters, none of whom have ever been affected with any form of cancer.

Two years and a half before he consulted me, while splitting wood, a splinter flew off and struck him on the centre of the lower lip, bruising somewhat the lip, and breaking the surface. Thinking the injury trivial, he paid but little attention to the sore, using at times a solution of borax, at others, the powder of burnt alum. For twenty years past he had been accustomed to smoke a clay pipe, and, notwithstanding the sore on the lip, continued to indulge in this habit. Soon after the accident, the ulcer on the lip assumed an irritable character, with indurated margin and sanious discharge, showing but little disposition, however, to spread. About two years from the commencement of his malady, he came to this city, from Connecticut, to obtain medical advice; and, visiting one of the dispensaries, a blue ointment, the composition of which he does not know, was prescribed for him as a local application. Returning home, he made use of this medicament, from which he suffered much pain; and he describes his disease as thenceforth making rapid progress, the surface of the ulcer becoming much enlarged, and the induration extending on either side towards the labial commissures. Four months after this, the disease had become so extensive and his sufferings so severe, that he again visited the city, to place himself under my care.

The lip now was converted into an angry-looking, indurated, and ulcerated tumor, presenting granular irregularities, of a dull reddish and purple hue, and bleeding each time the dressing was removed. The cancerous disease extended transversely entirely from one labial commissure to the other, not leaving the smallest interval of sound tissue; while it also extended for more than an inch downwards, two lines beyond the mento-labial furrow; the lip having the appearance of being everted. The free border of the lip presented about its centre, at the original seat of the disease, a large

ulcer with elevated margins; and from this the cancerous action had spread inwards along the mucous lining of the lip nearly as far as the point of reflection of the mucous membrane from the lips to the gums. The saliva continually flowed in quantities over the diseased surface of the lip. The glands below the lower jaw remained without contamination or enlargement, notwithstanding the duration and extent of the disease.

Operation.—5th Dec. The patient was brought into the amphitheatre of the New York Medical College, and seated upon a chair of suitable elevation. While the face was in repose, with a piece of No. 1 carmine, pointed, a dotted line, an inch and five-eighths in length, was made on each cheek, extending from the commissure of the mouth toward the extremity of the lobe of the ear, with a slight concavity upwards. From each commissure two other dotted lines were also made, extending downwards and inwards so as to meet at the lower part of the chin on the mesial line.

The patient's head was now supported by an assistant, who at the same time compressed the two facial arteries as they pass over the base of the jaw. Standing in front, and seizing with the forefinger and thumb of the left hand the left cheek, at the labial commissure, so as to keep steady the tissues, holding the instrument in the right hand, with a sharp-pointed, narrow, straight bistoury, I transfixed the tissues of the cheek on the dotted line, about four lines in front of the anterior margin of the masseter muscles. The knife was now directed along the dotted line so as to divide the entire tissues of the cheek, as well as the labial commissure of this side. Changing the bistoury to the left hand, and seizing the right labial commissure with the fore-finger and thumb of the other hand, the tissues of the cheek of this side were divided in a similar manner.

The lower lip was now held and drawn forwards by the fingers and thumb of the left hand, and separated from its attachments to the lower jaw as far down as its base. This done, and still retaining the lip with the left hand, an assistant at the same time aiding to maintain the tissues tense by grasping the cheek, the bistoury was carried downwards from the left commissure to the middle of the chin, dividing the entire thickness of the tissues in this direction. By a similar manœuvre on the other side, beginning the incision at the right commissure and carrying it downwards so as to join the last incision in the median line on the chin, the cancerous lip was removed without leaving any traces of the disease.

It now remained to repair the loss of substance thus resulting, by bringing into exact apposition the bleeding margins of the incisions, and to unite them by the twisted suture.

In order to render the extension of the tissues of the cheek more easy,

the flap bounding on each side the triangular loss of substance, was detached from the inferior maxilla by passing the bistoury along the line of reflection of the buccal mucous membrane from the gum to the cheek. The flaps were now drawn forward, so as to bring together vertically on the median line the bleeding edges of the inferior incisions. The horizontal incisions also meeting, formed the free border of the new lip. Along the vertical line of union five points of suture were inserted, beginning at the upper part, so as to secure evenness of the free border of the lip. The angles of the new mouth were next adjusted by inserting a suture pin on each side, at points suitable for the formation of the commissures. Two suture pins on each side were used to maintain in apposition the edges of the horizontal incisions.

The free border of the new lower lip, formed by the lower margin of the horizontal incision, still presented a bleeding surface. To regulate the shape of the prolabium, and to cover the bleeding margin with sound tissue, the mucous lining which invested the inner surface of the new lip was drawn over the bleeding edge, and united by five points of twisted suture with the integumentary tissue.

The patient was not placed under the influence of any anæsthetic; and he lost but little blood during the operation, the facial arteries having been efficiently compressed by Dr. Curtis, of Chicago, by whom, as well as by my pupil Mr. Maurice Peugnet, I was ably assisted. *Vide* Plate No. 1.

Progress of Union.—Tuesday, 6th Dec., day after the operation. A good deal of pain; had slept badly during the night; incisions look well; anodyne for the night.

7th. Much more comfortable; slept well; incisions show but little inflammation; ordered milk punch; anodyne for the night.

8th. Union proceeding favorably. Ordered beef tea—milk-punch continued.

9th. Fourth day after operation. Has slept well; union in some parts perfect. Removed two lower and the middle suture pins along the mesian line of union; also, two from the horizontal line on the left side, and one from the similar line on the opposite side. The mucous membrane had become united to the integument forming the prolabium; the suture pins here were also removed. Washed the parts with rum and water; same diet continued; quietness observed; anodyne for the night.

Sunday, 11th. Removed the two remaining pins from the median line. Union here perfect. Removed also the pins at the angles of the new mouth, on the left side; union perfect along the horizontal line of incision, including the commissure of this side. Union also perfect along the right hori-

zontal line of incision, except at the commissure; here slight ulceration had taken place at the site of the suture pin.

Wednesday, 14th. Every thing has been going on well; granulation progressing healthily at the left commissure; dressing continued here, of bals. peru ointment.

Sunday, 18. Granulating point at the right commissure nearly healed.

Sunday, 25th December. Twenty days after the operation, every part along the incisions entirely healed and united. The prolabium presents a natural appearance.

The patient discharged cured, feeling in good spirits, and expressing much astonishment at the present condition of his new mouth. *Vide* Plate No. 2.

Case 2. This case is in almost every respect similar to that which has just been related.

J. MacGivney; æt. 56; native of Ireland; wool-dealer by occupation; married; robust; applied to me for advice, January last.

There were no strumous manifestations about him. His family had all been free from cancerous disease; his father dying at ninety years of age, from old age; his mother at sixty-two years of age, without any marked cause. He says he never had any venereal malady, and that he has always enjoyed, until his present disease commenced, good health, and that he has been accustomed to wholesome and generous diet.

The disease, from his description, took its origin in a crack on the centre of the lip, which he attributes to cold. After the solution of continuity occurred on the lip, he continued to smoke a clay pipe, which had been a habit with him for thirty years past.

The ulcer did not increase much, but became indurated, at times affording a scanty, offensive discharge, at others becoming encrusted with a scab, which would at short intervals drop off. Living in the country at this time, he did not receive medical advice; but used, occasionally, some washes which were recommended to him by his neighbors, but without any good effect. The malady increasing, and giving him much inconvenience and pain, he came to New-York city, and consulted a medical gentleman, who prescribed an ointment for him; and with this he again returned to the country. Here he remained for nearly a year; and the malady still increasing, and the pain becoming intolerable, he again resorted to the city, to seek my advice.

At this time, his general health appeared somewhat impaired. The teeth were good. From the long-continued action of the pipe, the teeth were worn into a deep groove on the left side, between the canine and adjoining incisor teeth on the lower jaw, and at a corresponding point on the

upper. There were no irregular asperities of the dental arches, which could irritate the lips.

The whole of the lower lip had become involved in the disease, presenting an indurated tumor, ulcerated at many parts, irregular on its surface by angry fleshy points of a reddish hue, and bleeding upon the slightest touch, and extending transversely to the extent of $2\frac{3}{4}$ inches, from one commissure to the other, and downwards two lines beyond the mento-labial furrow. The ulceration extends inwards upon the mucous lining of the lip; and, by running the finger between the lip and the dental arch, the induration is felt extending downwards below the point of reflection of the mucous membrane, from the gum to the lip. The saliva flowed continually and freely over the diseased mass; the pain was excruciating. There was no glandular enlargement below or over the lower jaw.

The operation was performed after the same method as that practised in the preceding case; the progress of union went on without interruption; and on the nineteenth day after the operation, the patient was dismissed cured, with a new lip altogether resembling the original in function and appearance.

766 BROADWAY.



PART II.—REVIEWS AND BIBLIOGRAPHY.

The Transactions of the American Medical Association. Instituted 1847.

Vol. VI. Philadelphia, 1853; pp. 866.

[Continued from p. 208.]

The report of the Committee on Medical Literature is by Dr. N. S. Davis, of Chicago, Ill., and is made by an individual in the name of a committee, in the objectionable manner which we have before pointed out. The proper title would be Dr. N. S. Davis' report on medical literature. The paper is valuable, as giving the opinions of a gentleman who has been for some time conversant with our medical literature, especially with that of the periodical press. We conceive it is of no weight any farther than this. Holding this opinion, we do not feel called upon to discuss its topics, especially as we have been compelled to dwell very much at length upon some other papers contained in this volume. Our own views of our medical literature were

sufficiently, though briefly, expressed in the salutatory of the January number of the MONTHLY. Some of those views are accordant, some discordant, with those of Dr. Davis; but the differences are upon points in which there is room for doubt. We shall, then, content ourselves with saying that there is apparent in the paper a candor and fairness, not, indeed, unexpected, but not always found; a national spirit, not so bigoted as to see good only in that which is American, but independent enough to see and encourage that which is good among Americans; and an earnest desire for the elevation of our professional literature. No one can fail to consider these as great excellencies; and certainly no one can more cheerfully than we acknowledge their value, and trust they may have an extended influence.

The Committee on the Epidemics of Tennessee and Kentucky have made their report, not by an individual, but with the authority of all of their names. For this reason it has weight as a permanent document. The chairman, Dr. W. L. Sutton, held the same position on the committee which reported the preceding year. This, we conceive, is a very great advantage; for with an entire change of a committee there is too apt to be a repetition of the same facts, and of observations which have been previously made. A report like this, based on the observations of various gentlemen, can present only a synopsis of their observations as to the origin, symptoms, and character of diseases, together with the best mode of treating them. It is, in fact, of value from its thus condensing these observations into such form as makes the facts of convenient access, and permanently preserves them. To make an abstract of it, then, is impossible, and we shall not attempt it. The paper, however, we consider one of great value, and that not only now, but it will continue to be so. A great difficulty in the science of medicine arises from the want of precisely such observations, continued through a series of years, and carefully preserved. A great amount of labor must have been undergone by the Committee, and the gentlemen who have assisted them, in gathering their facts; and for this reason the thanks of the whole Association should be accorded to them. It is a fact of some significance, we wish we could pronounce it auspicious, that this is the only report on epidemics in this volume; while in the volume which immediately preceded this, there were no less than *seventeen* such reports, with four other papers upon subjects directly connected with them. We know, only too well, how much difficulty there is in getting together the facts of which to form such reports, and how much labor there is in digesting and putting them in order after they are obtained. It is far more easy to write a brilliant essay upon some special subject, and one's individual reputation is far more widely extended by such a performance. Still, it is only by the constant accumulation of such statistics that the facts of disease, its causes, and the influen-

ces which render it epidemic, can be after a long time determined. To accomplish this, something more than *spasmodic* efforts are necessary; and the example of this committee, standing alone as it does, only renders its excellence more observable.

The report of the Committee on Typhoid Fever, submitted to the Association by the chairman of that Committee, Dr. Henry F. Campbell, of Georgia, is a valuable paper, inasmuch as it embraces a review of the literary history of this disease, and an excellent *resumé* of its prominent and characteristic phenomena, as collected and recorded by the most approved authorities and writers on this form of continued fever.

In this inquiry, and in the conclusions to which they have arrived, this Committee have not depended on their own observation of cases of the disease, but have based their views of the nature and pathology of typhoid fever, upon a careful comparison and consideration of the recorded observations of others.

“We have in no instance referred to our own observations of cases; for it is obvious to our mind that any views of disease founded mainly upon rational induction, would be less liable to fallacy when based on the recorded, careful observations of others, than when they are merely the interpretation of our own cases, always liable to preconceived opinions and foregone conclusions, which have ever proved most effectual and deplorable barriers to correct observation.”—Page 421.

Indeed, we have no evidence that the authors of this “inquiry into the nature of typhoidal fevers” have had any opportunities of acquiring a knowledge of the essential characteristics of the disease, from personal observation of cases of the disease. They do not profess, by the discovery of any new phenomena, to add anything to what are already known facts in relation to the disease; but by their own interpretation of these facts, which have been established by the repeated observations of others, they do propose new views, and infer new conclusions, in regard to the nature of the affection.

The authorities from which the history and statistics of the disease have been principally drawn by the Committee, are, the Remarks of M. Louis on Typhoid Fever; the treatise of Professor Wm. Jenner, of London, on the “Identity or Non-identity of Typhoid and Typhus Fevers;” Reports on Continued Fever, by Dr. Austin Flint; Essay on Fever, by Dr. Bartlett, &c., &c.

In tracing out the nature and history of typhoid fever, as the disease has been described by these different authors, the Committee have found that there are certain morbid conditions of the animal economy, which nearly

all writers have agreed to consider as being usually pathognomonic symptoms of typhoid fever.

"In the first place, there is always more or less prostration, with an impairment of the nervous system. Secondly, there is *fever*, which is continuous, but sometimes variable in its degree. Thirdly, in the vast majority of cases there is more or less diarrhœa, generally of an obstinate but passive character. And fourthly, its most constant pathological appearances have been found to be those which refer to the abdominal viscera, there being very uniformly some special alteration in the follicles studding principally the mucous membrane of the mesenteric portion of the intestinal canal, known as the glands of Peyer and Brunner."—Page 422.

There are, also, beside the above essential or characteristic symptoms of the disease, other manifestations usually attendant upon typhoid fever, which, although numerous, may be referred generally, in the opinion of the Committee, "to one or other of three classes of symptoms, the combination of which appears to constitute the disease, viz. disturbances of the *nervous system*, of the *circulation*, and of the *digestive organs*."

Following this classification of the essential characteristics of the disease, the Committee have reviewed each of these symptoms, comparing the views of the different authorities, and have also described pretty fully the anatomical lesions, both those considered by most pathologists as the essential lesions of typhoid fever, and those which are only occasional or accidental in their nature.

In pursuing this "inquiry," the Committee have occupied some thirty pages of the Transactions, without adding any thing new to what was already known of the "Nature of Typhoidal Fevers." But this somewhat extensive *réchauffé* of our authors must be excused; as we are told on page 451 that the object of the present treatise is, by an analysis of some of the most important phenomena in its natural history, to arrive at what they consider "the true, or, at least, the most rational theory of the typhoid affection."

But how the true nature of a disease is to be discovered and revealed, through an analysis and comparison of its principal phenomena, by inquirers who have never studied the vital manifestations of the living organism when influenced by the disease, nor have ever sought in the cadaver for the effects of these vital morbid acts, we are unable to conjecture. The Committee seem to be aware, for they express the fear, that "suggestions regarding the proximate cause of typhoid fever will meet no great degree of favor, for there is no disease in relation to which so many theories have been promulgated."

And why has this been the case, that among the many views of the nature of this form of continued fever, which from time to time have been brought to light, so few have outlived the season of their birth? Simply because, as we believe, they have been based in most instances, as in the

case of our Committee, on the recorded observations of others, and not derived from the "language of disease," interpreted by perfectly unfettered and unbiassed cadaveric researches.

Still, we would not be understood to say here, that the authors of this inquiry have failed altogether, in their pathological deductions, to elucidate in any degree this very obscure question. This ray upon the thick darkness may be, along this path of investigation, as the first gleam of the morning that leads ultimately to the fulness of day.

After a careful analysis of the anatomy and physiology of the great sympathetic or ganglionic system of nerves, and a consideration of the connection existing between this system and the phenomena of typhoid fever, the chairman of the Committee, Dr. Campbell, announces his conviction, that "the essential symptoms of typhoid fever are located in organs deriving their innervation principally, and in many instances entirely, from the ganglionic system."—p. 464. In short, that an abnormal state of this peculiar portion of the peripheral nervous system constitutes the primary and essential characteristics of typhoid fever.

"There appears to be," says the author, "a very close relation between the amount of disease observed in any particular portion of the organism—the alimentary canal, for instance—and the degree to which it is indebted to the ganglionic system for its innervation; thus we find but a small amount of disease, congestion, seldom any ulceration, in the *larynx*: ulceration is somewhat more common in the pharynx, œsophagus, and stomach, though still not abundant. It disappears in the *duodenum*, which receives but few sympathetic filaments, and again appears in the upper portion of the *ileum*, increasing, as we descend, *in direct proportion* to the amount of ganglionic fibres the part receives, till it reaches its maximum in the lower portion, where the nervous supply is very abundant; after which we find ulceration *occasionally* in the cœcum, still less frequent in the colon; till in the *rectum*, whose innervation is principally from the cerebro-spinal system, it is never observed. So, likewise, with regard to the other organs; we find the *liver*, *lungs*, and *spleen* are all subject to congestions, which can be referred to the same abnormal innervation of these viscera."—p. 465.

According to Dr. Campbell's views, therefore, the amount of disease in typhoid fever, with regard to localities, will be found to be in "an exact correspondence with the distribution of the sympathetic nerves," or in the proportion of the ganglionic innervation in any given parts. We have not room to examine this proposition, on the truth of which this ingenious theory of the author must rest altogether, in relation to all the parts ordinarily affected in typhoid fever; but if we take the first locality named in connection with the proposition, to wit: that "we find but a small amount of disease, congestion, seldom any ulceration, in the *larynx*," we shall discover that the author is at direct issue with one of the greatest pathologists of this or any other age.

"The typhous process," says Karl Rokitansky, "occurring in the air-passages, presents numerous peculiarities in reference to its connection with the general disease, with the morbid state of the mucous membrane of the small intestine, where, amongst us, it usually becomes localized as ileo-typhus."*

According to Rokitansky, the typhous process, when affecting the mucous membrane of the air-passages is developed with more intensity in the *larynx*, than when it affects the bronchial mucous membrane. In the latter location, it always appears as an intense diffused congestion, and "never gives rise to any apparent production of a secondary formation of the tissue of this membrane, such as is produced in immense quantity in the intestinal follicles, in cases of abdominal typhus." * * * "*Laryngo-typhus* is with us an unusually common and extremely unfavorable symptom in many epidemics of typhus. * * * As we see it in the dead body, there is almost invariably a loss of tissue, or ulcers of the same kind as those in the intestines, but less deep-seated."†

With regard to the treatment of the disease, Dr. Campbell suggests *strychnia*, "in minute but efficient doses," as the appropriate remedy in typhoid fever.

We shall close our review of this inquiry into the nature of typhoidal fevers, by a brief reference to another hypothesis, on the subject of the nature and origin of typhoid fever, which at this time is finding some advocates in Europe.

At a meeting of the Imperial Academy of Medicine (Paris) in December last, M. Brichteau read a report upon a memoir of M. Druhen, sen., member of the committee of hygiene in the province of Doubs, on the history of epidemic diseases which had prevailed in the province from 1836 to 1850.

A part of M. Brichteau's report is devoted to a critical examination of documents collected by statistics, and the numerical method, for the support of an hypothesis, which, originating with a mathematician, had been propounded by M. Bayard, a physician, in the following terms:

"Confluent variola and typhoid fever are one and the same disease, sometimes external, sometimes internal, produced by the combination of variola and typhus. That is to say, in other words, small-pox, whose development is prevented by vaccination, is changed at a later period into a kind of internal variola, which is nothing else than typhoid fever; so that the mortality of infancy, arrested by vaccination, is found to be changed and carried forward to a more advanced period of life. Instead, therefore, of dying, as infants, of variola, they die in after life of dothinteritis. Conse-

* A Manual of Pathological Anatomy, Sydenham So. Edition. Vol. IV. p. 22.

† Op. Cit., p. 24, 5.

quently, vaccination, so far from being a useful preservative in infancy, may be a most unfortunate gift to humanity, one which preserves its victims to be sacrificed in youth and adult age.”*

On page 509 is to be found a paper entitled, “On the Surgical Treatment of Morbid Growths within the Larynx, illustrated by an original case and statistical observations, elucidating their nature and forms. By Gurdon Buck, M. D.,” &c.

Dr. Buck has made two other contributions to the surgery of the larynx in former volumes, and we have determined to take the three articles in connection in this review. The importance of the subject itself might justify such a recurrence to previous publications; and the renewed direction given of late to the therapeutics of this region, would seem to require a *résumé* of Dr. Buck’s labors on the subject, in order that the profession may fairly weigh their value. Accordingly, on page 277 of vol. IV. of the Transactions, published in 1851, we read, “Six additional cases of Œdematous Laryngitis, successfully treated by scarifications of the Epiglottis and Aryteno-epiglottic folds. Communicated by Gurdon Buck, jun., M. D.,” &c.

Again, on page 135 of vol. I., published in 1848, is a third article under the heading, “Œdematous Laryngitis successfully treated by scarifications of the Glottis and Epiglottis. By Gurdon Buck, jun., M. D.,” &c.

Without any envious hankering after a similar celebrity, we think we can affirm, in justice to both parties, that the American Medical Association have displayed the greatest liberality, in thus affording Dr. Buck such ample opportunity of putting completely before the profession his experience in relation to the treatment of the diseases which form the subjects of the papers just enumerated. It seems to us, nevertheless, to be a very pertinent question for consideration, whether all these communications are not more adapted for the pages of some ordinary periodical publication, rather than for the place they occupy, as a portion of the records of a national scientific body; whose chief aim, we opine, should be the enunciation of well-recognized and authenticated abstract principles, derived from a careful generalization of well-observed facts, the establishment of sound medical doctrine, and the conservation of historical details.

That, *on individual points of practice*, the information contained in these contributions is valuable, must be acknowledged; and the statistical table included in the first displays a highly commendable amount of industry in compilation. But, with the most respectful deference to the judgment of the committees who admitted them to the privilege of their present notoriety, we assert that we cannot perceive, and we therefore deny, that they throw any light on either the pathogeny or special pathology of

* Gazette des Hôpitaux. December, 1853.

those very formidable diseases. The illustrations by which all of these papers are accompanied, must have formed an item of considerable magnitude in the expense-account of the publications in which they respectively appear; an outlay of the funds of the Association hardly warranted, we submit, either by the excellence of the illustrations themselves, or the style in which they are executed. The whole of the information which these several documents contain, *of practical importance*, might, we can imagine, very advantageously to the profession and profitably to the funds of the Association, have been condensed in the space of half-a-dozen pages, including the table. However, there they are in all their integrity, put before us with the *prestige* of endorsement by the Committees on Practical Medicine and Surgery (why the first should have taken up one of them is a matter of surprise): as reviewers, we are privileged to judge them by their own merits.

To this task we now address ourselves; and we would premise that we consider it to be most fortunate that Dr. Buck's well-established and well-earned reputation enables us to do this with a freedom which, under other circumstances, we might mercifully abstain from exercising. We shall take up the papers, and the cases they contain, in their chronological order of publication, the reverse of that in which they are cited above.

In the first essay made by our author on the subject of œdematous laryngitis, there is no attempt made to give us the etiology of the disease, but he dashes off boldly at once to a description of his treatment, and the means used by him, with a relation of the cases in which it was employed. There is not even an attempt at ratiocination on the important analogy between the benefit known to be derived from scarifications of the œdematous subcutaneous cellular tissue in external inflammatory diseases, be the same erysipeloid, phlegmonoid, or gangrenoid, and the anticipated favorable result from a similar treatment of internal localities—the laryngeal mucous membrane to wit—so happily for the world, arising as a conviction in his mind. His conviction, we are told, had been latent for more than a year previous to the period at which he revealed it to his hospital associates, on the occurrence of the first case which offered an opportunity for the application of the practice. As nothing is said on the subject of the sources from which this conviction sprung, we are justified in supposing it to have been intuitive; and are thus naturally led, from this one instance more, to admire and rejoice over the wonderful fecundity of human genius and intellect.

After a few prefatory sentences on the value and importance of *tact* as a means of diagnosis, written in a manner which, although not distinctly stating it to be such, at least implying that this was also an original idea or "conviction" (subsequently, page 149, the credit of the touch diagnosis is assigned to M. Thuillier, on the authority of Bayle), he commences the nar-

rative portion of his paper; and for the better elucidation of the description, we are referred to two plates. The first being a diagram intended as a view of the parts involved, taken from a most unnatural point of view, and therefore purely imaginative, in which the point of a finger and the extremity of a curved instrument, are the prominent objects; the latter is seen dipping down into, what appears to us to be, a laceration of the posterior wall of the œsophagus caused by its edge. However, this may be a misapprehension on our part of the true state of things, and not, after all, the fault of the diagram, the shaded portion of which, to our astute mind, bears a strong resemblance to the inside surface of the flat side of a Greenbay oyster.

"But little difficulty is generally experienced in carrying the end of the finger above and behind the epiglottis, so as to overlap it and press it forwards towards the base of the tongue," p. 136. We confess to a large share of scepticism on this point, unless indeed the operator is happily endowed with an unusual length of digit; and even then we question the utility of the proceeding in the course of the operation, and are inclined to deny the possibility of accomplishing it with that care which should characterize the skilful surgeon; at least, to carry out the author's instructions, in most throats, with an ordinary finger, would involve such a cramming of the metacarpal knuckles into the os externum, as entirely to impede vision and materially interfere with the successful manipulation of the "curved knife and scissors," which are so ingeniously delineated in plate 2.

Let us now analyze the cases; and, to facilitate the process, we give a highly concentrated preparation of the leading points.

Case I.—Treatment (*in strict order of detail*). Stimulating gargle; six leeches to the larynx; *scarifications*; twenty ounces of blood from the arm, and grain-doses of tartar emetic. Medicinal treatment continued for three days. Cured.

Case II.—Treatment. Inhalation of warm vapor; poultices to the neck; blister over the sternum; no relief. *Scarification*; solution of nitrate of silver, 20 grains to the ounce, applied to the fauces an hour after the operation, and once the following morning. Patient relieved. No statement as to other treatment.

Case III.—Treatment. Sixteen ounces of blood taken from the arm: vomiting by compound syrup of squills; 20 grains of calomel; warm fomentations to the throat. *Scarifications*; six leeches to the larynx; nitrate of silver on either side of the neck, externally. Next day, two grains of calomel every two hours, and $\frac{1}{2}$ of a grain of tartar emetic at the same interval alternately. (These medicines were administered for at least four

days.) Second day, *scarifications repeated*. Third day, patient worse in every respect. Vomiting, with sulphate of copper; *scarifications repeated*. Same day, danger of suffocation so great, tracheotomy proposed, but refused by patient. At this time, erysipelas appears on the cheek. Fourth day, "To our great surprise, patient is still living, and apparently no worse; says he feels better. Erysipelas is spreading on temple and forehead." Erysipelas runs its course and patient recovers, free from all symptoms of laryngeal disease.

Case IV.—Complicated with typhus and bronchitis. Treatment. Had been blistered over the chest, and was taking Stokes' expectorant (*the active basis of which is tartar emetic*). *Scarifications*; Stokes' expectorant continued. Second day, patient worse. *Scarifications repeated*; Stokes' expectorant continued; blistered surface kept sore. Patient recovers.

Case V.—Treatment. A blister had been applied to the throat; ten grains of calomel, followed by black draught; *scarifications*. "After waiting half an hour it was judged most prudent not to rely exclusively upon the scarifications, but to give the patient the additional chance of tracheotomy, which was accordingly performed without delay." Next day patient improved, and convalescence followed. "No auxiliary treatment was employed."

"The other three cases which occurred terminated fatally, and without scarifications being resorted to."

Now, we appeal to the candid reader, and would ask, whether in these cases, as reported, Dr. Buck has substantiated a good claim for his scarifications? Can it truly be said of any one of them, or of the result of all of them, that on the scarifications *alone* the cure depended? Was nothing due to the blisters, poultices, fomentations, inhalations, nitrate of silver externally and internally applied, calomel, tartarized antimony, leechings, bleedings, to say nothing of the vomiting and purging, and, lastly, to tracheotomy? In case third, we ascribe the beneficial result to the inflammatory metastasis, for it is remarkably spoken of, that after the erysipelas made its appearance on the cheek, the patient began to recover from the laryngeal difficulty, and that to "our great surprise." That scarification was apparently a useful adjuvant, we will not deny, as much so as scarifications usually are in external inflammations. It is altogether ungenerous to say, page 145, "In cases II. and IV. no other efficient auxiliary treatment was employed." Inhalations; blister; poultices; *solution of nitrate of silver*; no auxiliary treatment! Oh! Galen! Oh! Hippocrates! As for the special pleading against the effectual benefit derived from tracheotomy in case V. as also in the cases quoted in his argument, in which the result was

entirely favorable, *all the cases recovering*, we must say that it is better evidence of the author's forensic, than of his logical powers.

And those three fatal cases—Oh! why were they permitted to die, without one gash, one scratch being made for their rescue? This is a fair question. If confidence was so fully established in the efficacy of "the new treatment," "the results obtained having so far exceeded the most sanguine expectations," why, we repeat, was it not tried in those three unfortunate cases? We confess that we are not assisted in explaining this inconsistency, by the underquoted passage, which immediately follows the author's allusion to them.

"They, however, possessed peculiar interest, as furnishing illustrations of the anatomical characters of the disease; and, happening, as two of them did, after the first trial of the new method of treatment, they served to strengthen confidence in its adaptation and practicability."

This is surely an enigmatical paragraph. Does it mean that the patients were suffered to die in order to have an opportunity of "illustrating the anatomical character of the disease;" or does it imply that some doubt existed on this point, and also, as to the operation itself, and that the opportunity of examining the condition of the parts, was requisite "to strengthen confidence in its adaptation and practicability." Read it as we will, it is most botheringly paradoxical.

And here, *inter alia*, we beg to correct our author a little in his erroneous views of the anatomy, physiology, and pathology, of this locality and this disease. He says: "In the third case, not represented, the swelling also occupies only one edge of the glottis, and *in all three cases, the swelling descended to the vocal chords*, and encroached very much on the cavity of the larynx." What are the conditions necessary, as to tissue, for the existence of cedema? A cellular tissue capable of distention by—or of containing—a fluid, and surrounded by another tissue, which may or may not be possessed of elasticity; *e. g.*, mucous membrane, cutis, muscle, fasciæ, &c. Now, it is a well-ascertained fact, that under the mucous covering of the vocal chords there is no cellular or areolar tissue; the membrane is so closely bound down over the structure of the thyro-arytenoid articulation, as to render their separation a matter of extreme difficulty, if not a complete impossibility, without lesion either of the membranous or cartilaginous structures involved. If there be any areolar tissue discoverable there, it exists under such a condition as to render its infiltration by fluid impossible;—and how perfect a provision this is, in the harmonious design and construction of the organ, by Eternal Wisdom!

If, therefore, morbid change existed at the vocal chords, it must have been thickening of the membrane itself—hypertrophia. The annals of

pathology are not barren, as we shall hereafter perceive, of examples of such a condition.

Before noticing a few other points in this first paper, which may be advantageously illustrated by reference to the second, let us now pursue the same process of analysis with the "Six additional cases," vol. iv. p. 278.

Case I. Œdema, resulting from a superficial burn. Treatment, thirty leeches applied to throat, followed by hot fomentations; no relief; *scarifications*; recovery; no other treatment stated. *Good*.

Case II. Phthisical subject. Patient had been kept nauseated by tartar emetic. Ten grains of calomel were given, followed by oil; tobacco poultice to the throat, and mustard pediluvium; strong solution of nitrate of silver applied to the interior of the larynx with a probang. "Instantly a convulsive paroxysm of suffocation was produced, and for a few seconds threatened the life of the patient. After waiting a minute or two, and finding the danger of suffocation still continuing imminent," *scarification* of epiglottis and aryteno-epiglottic folds. Patient recovers. *Doubtful*.

Case III. Treatment, *scarification*; twelve leeches externally over the larynx; $\frac{1}{4}$ of a grain of tartar emetic every two hours; blister to the nape of the neck. Dyspnœa increased. Twelve leeches over larynx; cathartic, and poultice to throat. Patient better. Tartar emetic at longer intervals. Improving. Oxymel of squills; emplastr. saponis to throat. Still improving. Camphorated mercurial ointment to be rubbed on throat, covered with oiled silk. Epiglottis natural. Patient recovers. *Very doubtful*. (Not the recovery, but the case, as to the specific treatment.)

Case IV. *Scarification*. Eight leeches, followed by poultices; $\frac{1}{4}$ grain tartar-emetic every two hours; Bell's gargle; solution of nitrate of silver, \mathfrak{D} ij to \mathfrak{z} i, applied daily, for three days, to fauces. Cured. *Exceedingly doubtful*.

Case V. *Scarification*. Leeches, and tobacco poultice; ten grains of calomel; cathartic. Relief from scarification immediate and complete. *Doubtful*.

Case VI. Turpentine epithem had been applied. *Scarification*. Patient relieved. *Very good*.

Now, we think that a careful and candid judgment, founded on the issue of these twelve cases, would express this much for the proposal to scarify the tumified parts. That it is a ready and efficient,—we will go a

step further, and say,—a very scientific and surgical mode of relieving the urgency of the impending distress and danger from œdema, from whatever cause arising ; but that it is a new treatment,—that it is all-sufficient,—and that it is superior to all other modes, we unhesitatingly deny. We now proceed to show upon what grounds we rest, in expressing so unqualified an opinion in contradiction to the “convictions” of Dr. Buck.

In the opening of his second paper, the author, still claiming an originality of conception on his part of the practicability and utility of this operation, admits that it had been previously proposed and carried into effect by M. Lisfranc. It is quite possible that two men of equal intelligence, directing their thoughts to the same point of investigation and reflection, may each, unknown to the other, arrive at the same conclusion, by reasoning from the same premises. Nay, instances are not altogether wanting, in which the ideas then formed have been clothed in nearly identical language. Such coincidences are, however, rare, and fully to establish their coincidental character, they ought to be coëval in their promulgation. It is, therefore, somewhat unfortunate that Dr. Buck had not seen this proposition of M. Lisfranc, which was made, put into practice, and the results published, twenty-four years previously. He seems also to have forgotten, when making this acknowledgment in his *second* paper, that he had already done as much in a note appended to the first which he published ; at least, he makes no allusion to this fact, although he reviews the contents of that publication. This supposition of obliviousness would seem to be strengthened by the circumstance, that the source of his authority is differently stated. In the *note* he quotes from Valliex's *Guide du Médecin Practicien*, published in Paris in 1842 ; in the *second* paper he quotes M. Lisfranc himself, from the *Journ. Gén. de Médecine*, published in 1823.

Nor is it less singular, that, in preparing his first article for the consideration of the learned scientific body to whom it was submitted, so comparatively old a statement by so celebrated a surgeon should have escaped his attention ; more especially as he seems to have hunted up the literature of the subject industriously, for we find in a previous part of the *text* of this article, allusion made to a proposition of M. Lisfranc to make punctures of the swellings in œdema of the glottis. Now, it is very clear to us, that this is evidently the same operation for which he gives that surgeon credit in the *note* to the first and in the *text* of the second article ; for we discover the authority referred to in the *text* of both articles to be the same, *Dict. de Med. et de Chir. Practique*, tome ii. p. 41, and in both places Mr. Ryland is quoted as saying, “I doubt whether this little operation has ever been performed.”

Furthermore, in a preceding sentence in the *text* of the first paper,

notice is taken of Dr. Marshall Hall having, in 1821, two years before M. Lisfranc, thus written: "But I now regret that I did not propose the scarification of the epiglottis and glottis, so as to evacuate the blisters."!! So much for the originality of those "convictions" and "the new method of treatment."

We will pass to the next point, the reliability and sufficiency of this mode of treatment.

In opposition to the opinion of several illustrious writers, we venture to question whether œdema of the glottis ever occurs as an idiopathic disease. We regard it as a secondary affection, a consequential result, or a symptomatic condition. Thus, we see it connected with disease or lesion of the contiguous tissues; existing in inflammation of the laryngeal apparatus (and this we believe to be more generally erysipeloid in its character than is stated by most writers); or occurring as the result of general constitutional disturbance, particularly in those diseases evincing a hydropic tendency. Be this view correct or not, however, it will not be denied that the great objects to be attained in the adoption of therapeutic means, are the restoration of the lost balance between the absorptive and secretive functions, the removal of the effused fluid being incidental, and the resolution of the primary or producing cause. Shall it be said that these several results are to be, or can be, attained by scarification alone? The chief, the important, the *only* use of the scarification is to effect the more speedy evacuation of the effused fluid, *when its presence interferes materially with respiration*. And on this rests the whole merit of the suggestion, or its practical application, contained in the papers under consideration. But that this is not all which is required, is clearly demonstrated by the cases reported, in which the medicines administered and other means employed were material, and which we regard, every assertion to the contrary notwithstanding, as having been "efficient auxiliary treatment."

In only one of the cases, the last of the twelve reported, can it be said that the cure depended entirely on the scarification; and in this case the symptoms do not appear to have been sufficiently urgent to warrant the proceeding, without, in the first instance, employing other active means, such as proved so successful in the other instances.

We will now discuss the last point of our objection, namely, that scarifications are not superior to all other modes of treatment: let us venture a little more and say, that they are inferior to another mode of topical treatment; and that, in many instances, they are likely to prove not only ineffectual, but positively injurious. And these propositions we shall attempt to demonstrate, in a great measure, from the reports here given.

The preference now implied by us, is for the application of nitrate of silver in strong solution. Happily for mankind, the advantage of this mode

of treatment in many of the affections of the respiratory organs, as first prominently pointed out, and certainly first substantially put into practice, by Dr. Horace Green, has received the approbation of the civilized world, lay as well as medical. It is a method of practice with which Dr. Buck and his colleagues were evidently familiar, for they gave it a partial trial in one case, and a very fair trial in another. In the latter, it will be, perhaps, considered a species of bigotry on our part, to say that the cure depended very much upon this powerful "auxiliary treatment;" and yet such are our "convictions." In the former, we contend that unnecessary alarm was created by the suffocative respirations, and that, had time been allowed, the patient would have rallied from these, without the necessity of tracheotomy, and possibly with a decidedly improved condition of the parts implicated. The spasmodic respiration produced, *in some instances*, by the application of caustic solution to the surface of the laryngeal membrane, soon passes off; and, although exceedingly distressing *to the auditor*, does not produce a proportionate degree of suffering to the patient, and is unattended with danger. Those who have employed this remedy in pharyngeal and laryngeal oedema and congestion, must have been forcibly struck with the beneficial effects produced by it, not only its direct and immediate astringent action, but its ultimate curative influence.

The inefficacy of scarifications was well established in cases III, IV, V, of the first report. We pass over the consideration of three others, in which the advantage derived from them appears at least questionable.

Let us now consider why scarifications would appear to be objectionable, and sometimes injurious. In case III. 1st report, the patient is reported to have been decidedly worse after the scarifications. It appears to us to be objectionable to disturb the integrity of the distended membrane; for we can easily conceive that after the evacuation of the fluid contained, its place might be replaced by air, forced in under the loose membrane, partly by atmospheric pressure, partly by the effort of strong expiration or coughing, which is exceedingly likely to follow the operation, and hence would arise an emphysematous condition, offering as great a mechanical hindrance to respiration as the oedema. Nor is this result altogether hypothetical: it has been observed to take place, and to present an evil quite as formidable, and by no means as remediable, either by caustic solution, the knife, or medicine. Again, it is highly probable that after free scarifications of the membrane, which has been raised from the subjacent structures by the effused fluid, and put upon the stretch, a fringe or valvular condition of the free edges would exist for a time, which would offer so many obstructing points to free respiration.

It is fair, also, to object that although the scarification relieves the oedematous distention at the moment, it does not promote absorption or arrest

undue secretion—as shewn by the necessity of its repetition—other remedial measures being required for this; an advantage which caustic solution eminently possesses.

While we will not deny to the knife, then, the power of immediately releasing the contained fluid, and relieving the urgency of the threatening danger, a point undoubtedly of great importance, we cannot admit it to possess such decided advantage in the *cure* of œdematous affections of the glottis and epiglottis as Dr. Buck claims for it.

In his last report on “Morbid Growths within the Larynx,” Dr. Buck has presented the profession with a very valuable statistical table of forty-two cases collated from various sources, exhibiting at a glance the particular features of each case. But we confess that, in the narrative of the case on which his report is founded, we find some singularly anomalous statements, which impair much of its value as a scientific clinical record. After recapitulating the several argumenta diagnostica employed to establish a satisfactory diagnosis, and thus excluding nervous spasm, œdema glottidis, membranous laryngitis, ulceration and thickening of the mucous membrane, or abscess around the cricoid cartilage, post-pharyngeal abscess, he concludes that “the limits were narrowed down to one other condition, and only one capable of producing obstruction; namely, the existence of a morbid growth within the larynx.” Some reservation, however, was made in favor of aneurism pressing upon the trachea. This idea was at length abolished in favor of the morbid growth. An operation was proposed and performed, being several times repeated, the details of which make up the bulk of the paper. To these we now devote our attention.

“The neck was short and fleshy, the notch of the thyroid cartilage could only be obscurely distinguished by the touch.” An incision lays bare the cartilages of the larynx, and the three upper rings of the trachea. The thyroid and cricoid cartilages and the exposed tracheal rings are incised (divided?), the sides of the larynx stretched apart, and the cavity exposed. Two or three granules, half the size of grains of rice, hung pendulous from thread-like stalks. The remainder of the tumor was attached by a broad base, partly concealing the ventricle, and extending higher up on the wall of the laryngeal cavity. The entire extent of the growth could not be traced, owing to the deep situation of the larynx. Several portions of the tumor were snipped away; on cutting them, their substance appeared to be of a firm consistence, not unlike condylomata. The next day a second attempt was made to remove portions of the tumor. This was abandoned; and an application of the acid nitrate of mercury was made to the rest of the tumor. The further application of the caustic was abandoned, in consequence of the necessity of disturbing the parts already highly inflamed. A further incision was contemplated; but, on consultation, abandoned in consequence of

the condition of the parts. The tube was left out—the patient slept—the tube was replaced. “Swallowing had now become quite impracticable, owing to extreme soreness of the throat, *and when attempted everything was rejected through the wound and tube*”! How did this occur? Did the food pass through the glottis into the larynx, and thence outwards? or had there been an accidental communication made between the trachea and the œsophagus, thus affording a channel of exit? *Nous verrons*. After this the power of deglutition returned; the wound healed, and for a season the patient was able to whisper a conversation with her family, wearing all the time a tracheal tube. These operations were performed on the 3d and 4th of May.

On the 20th of September, at the patient's request, the third operation—called the second, in the report—was undertaken. Dr. Buck had previously satisfied himself, by experiment on the cadaver, that it was possible to extend the incision upwards to the os hyoides, and split the base of the epiglottis to the extent of half an inch! accordingly, this incision was made, and it was also extended for an inch below the opening for the tube, which, it will be remembered, involved the first three rings of the trachea. Two or three pedunculated portions, as large as rice-grains, were readily torn away with the forceps. The principal mass, however, was found of a flattened form *and closely attached to either side of the ventricles*, spreading forwards over the base of the epiglottis. *Their extent could better be appreciated by the touch than the sight*. The passage of the rima glottidis was so much contracted by them, that the end of the little finger could only be made to enter it, from below upwards, *by considerable pressure*! It is questionable; we think, whether this feat can be accomplished, even in the cadaver, with a healthy condition of the parts, without *considerable pressure*. *For the first time*, at this stage of the proceedings, on passing the finger through the mouth over the epiglottis, the tumors could be distinctly felt at the orifice of the larynx. The extent of the disease was found to be so formidable, that notwithstanding the bold attempt and extensive incisions made, the painful conclusion was forced upon the operator that its entire removal with the knife was impossible. The clawed forceps, notwithstanding, grasps all that could be got at, which is pared away with the bistoury, until at last the *rima glottidis was thus enlarged* sufficiently to allow the finger to pass without resistance! What, we venture to ask, became of the vocal chords, the chief natural source of impediment to communication between the pharynx and the trachea? A short time only is said to have elapsed after the healing of the wound before unequivocal signs of the *recurrence* of the disease manifested themselves. Can a disease be said to recur which has never been removed? It may increase in extent and become more malignant in character, but it is still present. After this

we have a sad state commencing; the dyspnœa is easily excited by exercise or emotion; the tumor more readily felt by the finger passed into the mouth; increased difficulty in replacing the tube after its removal; considerable hæmorrhage is caused by changing the tube; she could still whisper. The tumor not only encroached, by its growth, upon the tube; but this gradually worked its way up, in consequence of the chin being drawn down by the contraction of the extensive cicatrix. It was now proposed to make another opening in the trachea as low down as possible, which was accomplished on the 7th of January, 1852. The contraction of the parts rendered it necessary to dissect up the closely-adherent skin and condensed cellular tissue. After these preliminary dissections the trachea is entered, *more than half an inch* from the old opening. The wounds again heal; but, as the cicatrix contracts, the same tendency of the tube to work upwards exists; difficulty of changing the tube renewed; difficulty of swallowing steadily increases; fluids alone can be taken. In the month of March she discharged from her throat a hard substance of a dark color, of the form of an eye-tooth—and the patient so regarded it. From her description, Dr. Buck regarded it as one of the arytenoid cartilages, in a state of necrosis. It had probably come from the right side of her throat. There was now, for weeks, a daily discharge of bloody fluid from the throat, as well as from the tube, which became fetid, of a gangrenous odor; and portions of a tough, fleshy substance were also brought up from the throat. Finally, on the 4th of August, the lady died.

Now, it is somewhat remarkable, and very unfortunate for a just estimate of the treatment, that throughout the whole graphic details of these several cuttings, not one word occurs to lead to the supposition that any coadjutive remedies were employed; not one single dose of medicine calculated to promote the arrest or removal of the diseased structure is reported as having been administered. The knife, the knife alone, was to have accomplished all; and after laying the laryngo-tracheal tube open from the base of the epiglottis to within a short distance of the bifurcation of the bronchi, the patient, who is reported to have borne the several operations with magnanimous fortitude, dies. And what does the dissection reveal? On opening the *œsophagus* posteriorly, the morbid growth was found to have spread over the orifice of the larynx down upon the anterior wall of the pharynx, as far as the lower edge of the cricoid cartilage, and presented a moderately elevated, flattened tumor. It appeared to be deposited in the submucous cellular tissue, in small, agglomerated globules. On opening the larynx and trachea posteriorly, the entire cavity was found to be invaded by gangreen, *which had destroyed the morbid growths* covering it, and exposed the cartilaginous walls in a state of necrosis. The whole vocal apparatus was destroyed. "The rings of the trachea, from the first downwards, were

entire, and retained no trace whatever of the openings that had been made for the tube (this is remarkable, certainly, when taken in connection with the fact that, in the first operation, a portion of the two upper rings of the trachea was removed on either side, in order to lodge the trachea tube; and in the third operation, a semicircular piece was seized and excised); *the tube having worked its way gradually upwards from the trachea back to the larynx!*" How marvellously active the reparative powers of nature must have been! The reproduction of the portions of cartilage removed by the knife, and the absorption and reproduction of the rings, permitting the passage upwards of the tracheal tube, going on coincidently with a gangrenous condition of the upper portions of the canal, is somewhat of a pathological paradox. How singularly unfortunate, that some direction could not have been given to this great vis naturæ with the view of removing the offending mass!

All the notice given to other medicamentary measures, is the brief introductory statement of the circumstance that the application of a strong solution of nitrate of silver had been made to the larynx, irritants externally to the front of the neck, in conjunction with other treatment, *without benefit*. We find nothing said in the postmortem report, of a communication between the œsophagus and trachea, and therefore conclude that, in being expelled from the wound and the tube, the food must have made the circuitous route through the laryngeal opening to the trachea, a circumstance which occurred frequently.

The microscopic examination declared the structure to be non-malignant, *per se*, and to belong to that class of morbid growths known as epithelial. The recurrence of the gangrene is regarded by the author as a unique feature in respect to the larynx. We are unwilling to follow the author through his classification and division of these affections of the larynx, and his criticisms upon Dr. Green's mode of treatment, as we have already occupied a large space by the analysis of his case. We must content ourselves with asserting that, presuming the diagnosis, in the first instance, to have been correct, and admitting that the insertion of a tracheal tube was most useful in permitting a freer performance of the function of respiration, we do not consider that the repeated operations were justifiable after the first had revealed the true nature of the case; that the gangrene may be accounted for by the clipping and paring away in order to permit, and the effort made to pass, the finger upwards, either with or without considerable pressure; and that the total absence of all constitutional treatment showed an unwarrantable reliance upon operative interference alone. The case is, indeed, not without "extraordinary interest and importance;" and we feel convinced that "the experience afforded by it, in its whole progress," will furnish such "useful suggestions for the guidance of the practical surgeon," that no one

will ever again attempt a similar course of proceeding, or neglect the multiplied means afforded by the Pharmacopœia to aid such powerful efforts of nature in so good a constitution.

The last of the papers which precede the prize essays, is "On the Sympathetic Nerve in Reflex Phenomena," and is by H. F. Campbell, of Georgia. This occupies not quite five pages, and is an assertion that M. Cl. Bernard is not the first who has carried the phenomena of reflex action beyond the cerebro-spinal nerves to those of the great sympathetic. The following sentence gives the gist of the whole paper :

"As we have before indicated in this report, we do not feel authorized to lay full claim to the above theory without further investigation of the subject; but with all due courtesy to that highly distinguished gentleman, we can say that we feel assured that these views are not original with M. Bernard, unless he entertained them previous to June, 1850."

The question is simply one of *priority*, not of *originality*, for we submit that M. Bernard's views may be entirely *original*, even if they were not entertained "previous to June, 1850." He may have been preceded by Dr. Campbell; and still he may not have known it, and may have passed through all the processes of reasoning necessary to an original observer. We consider this paper a *fair* one for a medical journal, but to be entirely out of place in these Transactions. If Dr. Campbell is prepared to claim and to prove his priority in this doctrine, no one can be more ready than ourselves to rejoice in this—*triumph* shall we say—of an American; but till then it seems hardly worth while to deny originality to M. Bernard.

We thus close what we have to say of the different papers contained in this volume. Not that more might not have been profitably said, but that we have occupied more space than we intended, perhaps more than our readers have altogether approved of. We have objected to the matter and manner of several of the papers contained in it, and have not feared to express our opinions fully and freely. No man, we suppose, allows any production of his pen to appear in print, especially after having presented it to a learned society, without being himself prepared to meet its statements, to abide by his doctrines, or to be judged by those rules of criticism which are everywhere established. As we have before intimated, some of the papers in the Transactions become of importance, not from their intrinsic merits, but from their being placed in this volume. Others are important, not from the originality or excellence of their doctrines, but from the name of the author; and their teachings become dangerous from the same reason. Comparatively few of these papers are such as ought to emanate from a *national* association, if it would do the most credit to the country. This is no new defect in these publications; and in order to show it, we

have in one instance gone "behind the record," and included in our observations cases which have been previously published.

With all this, we desire distinctly to assert that we are no enemies to the Association; on the contrary, we are among its best friends. True friendship sometimes calls upon one to say things not perfectly pleasant to hear, but they are not on that account less important or less profitable. We wish the Association to be, as it ought, an honor to our country and a firm pillar of science; but we feel free to confess that if its present system continues, it will become a reproach instead of an honor, an offence instead of a benefit; and a means of personal or party aggrandizement, instead of a means of elevating our national profession. It is without fear of contradiction that we assert, that papers every whit as good as these reports, perhaps with one or two exceptions, are constantly published in the various medical journals of our country. All of their authors would, doubtless, be glad of the *prestige* of publication by this Association, and all have an equal right to it. Preference ought not to be given to one over another, simply on the ground of favoritism, or because an author has boldness enough to present it to the Association. Merit should be sought out and encouraged; and if such papers as are contained in this volume are worthy of a place in these "Transactions," then let the other equally deserving authors be found out, and their papers also drawn from their modest concealment. That better papers may be obtained we are very confident, and believe that the results of offering prizes for valuable communications has shown this to be true. Whether or not this is the best mode to draw them out, is not for us to decide. The material is, we believe, abundant in the minds of American authors; and it is the especial duty of this Association to afford an opportunity for its manifestation.

The sessions of this body, pleasant as they may be as occasions of *réunion*, professional and personal, are fearfully meagre in that which interests a scientific man, earnest in the pursuit of professional knowledge. The method adopted by the American Scientific Association is far more adapted to produce interesting discussions; and all know that it is frequently in these debates that those sparks of truth are struck out, which not only scintillate, but which kindle huge fires. The vexed questions of parliamentary usage which are constantly recurring in societies whose members are perpetually changing, would by this method be in large measure excluded; while every one could, according to his inclination, pass from a surgical paper or discussion to one on obstetrics, or upon the more general practice of medicine. However, we can now only allude to this thing.

It is true, neither this nor any other body can ever be perfect, and this we do not expect. But it is also true, in our opinion, that we have a right to look for better things from this Association; and therefore we have spoken

plainly and candidly. Honeyed and pleasant words have been too common for us to suppose that we may not be met with something of the airs of a petted child. But we have spoken the truth, felt, not by ourselves alone, but by many in the profession. We have done our duty ; let others do theirs.

PART III.—CHRONICLE OF MEDICAL PROGRESS.

[The abstracts and translations found under this title are made expressly for the AMERICAN MEDICAL MONTHLY.]

ANATOMY.

On the distribution of the Bloodvessels in the Lungs. By JAS. NEWTON HEALE, M. D.

The author's investigations have led to some very interesting results, of which the following is a summary :

1. The *pulmonary artery* makes no anastomoses whatever with any other artery, nor do its own branches anastomose together. Its branches go direct to the air-cells, and are there distributed, and terminate as arteries [*i. e.*, in capillaries]. None of its branches go to any other tissues of the lungs besides the air-cells, except some few which perforate the subpleural cellular [areolar] tissues, and are distributed to the pleura ; some of these also cross the posterior mediastinum, beneath the pleura, and reach the thoracic pleura.

2. But the capillaries thus distributed to the air-cells, are *extended* in a peculiar and very characteristic manner, from the cells to the bronchial mucous membrane ; this peculiar vascular plexus being traceable even as high as the trachea, and finally merging in minute venous radicles, which combine to form the pulmonary veins. No branches whatever of the pulmonary artery are distributed to the bronchial membrane, without previously becoming capillary upon and among the air-cells ; and no arterial blood is obtained by this membrane from any other source.

3. The *bronchial* (so called) arteries have their own special distribution. They do *not* supply any portion of the bronchial mucous membrane ; and do *not* at all communicate with either the pulmonary arteries or veins, except as supplying their cellular sheaths, and therefore, in all probability, furnishing their *vasa vasorum*.

4. The bronchial arteries (injected by filling the *aorta*) terminate in veins, ramifying in the subpleural cellular tissue ; and which mostly, after extending on the surface of the lung beneath the pleura, pass between the

two layers of pleura forming the ligamentum pulmonis, and finally terminate in the œsophageal and other veins in the posterior mediastinum. Some of them, also, probably terminate in the azygos veins, the jugulars, the diaphragmatic, and the venæ cavæ; in short, wherever they can meet a systemic vein conveniently situated. But these veins form no communication with the pulmonary veins, either in their capillaries or their larger trunks.

5. The *pulmonary veins* return *all* the blood carried to the lungs by the pulmonary arteries. They are, therefore, formed from two distinct sets of venous radicles—the first collecting the blood from the perimeters of the air-cells (*i. e.*, the part of the cells farthest from the bronchial tube connected with them), and from the surface of the lungs and the interlobular spaces; and the second, commencing from the basis of the air-cells, and from the vascular plexus of the bronchial membrane, before described. The larger branches formed by the junction of these two sets, at length accompany the larger bronchi and the pulmonary arteries, and finally terminate in the left auricle of the heart. The blood from the plexus of the bronchial membrane must be different in character from that derived from the air-cells directly, since the epithelium and the bronchial mucus have been derived from it after leaving the air-cells [while the latter is pure and perfectly aerated blood].

6. It is possible to completely inject the pulmonary artery and veins, without at all injecting the bronchial artery or veins. It is also possible thoroughly to inject the latter without at all injecting the former; and in the latter case, the bronchial membrane will remain wholly uninjected, however perfectly the so-called *bronchial* vessels may have been filled.

7. By injecting the lung through the pulmonary *veins*, the bronchial membrane becomes thoroughly injected, even before the air-cells are so. But when the pulmonary *artery* alone is injected, the air-cells become injected long before the liquid reaches the bronchial membrane. In neither of these cases, however, are the so-called *bronchial* arteries, or the veins corresponding to them, in the slightest degree injected.

8. The coats of the lymphatic vessels of the lung are also supplied by the capillaries directly distributed to the air-cells, and terminating in the pulmonary veins; and the vascular plexus upon them strongly resembles that upon the bronchial mucous membrane.—*Annals of Science*.

PHYSIOLOGY AND GENERAL PATHOLOGY.

Tuberculosis of the Mesenteric Glands, and Intestinal Worms. By Dr. LEDERER, Assistant at the Clinique for Children, in Vienna.

He who is in a position to be frequently consulted for chronic diseases, as is the case in a hospital for children, must be truly astonished at the important part which the co-called disease of the mesenteric glands and worms are still made to play; and it appears difficult to decide whether these two hobgoblins were first introduced into the nursery by the public, or by the older physicians, who had very little opportunity of seeing their diagnosis confirmed or contradicted upon the corpses of children. But when we consider the numerous absurd expressions which many physicians still use

as a cloak for their imperfect pædo-diagnostics; when, besides, we yet find in recent manuals a *febris meseraica*, and *scrofula meseraica*, with their symptoms, so exactly described, and a particular pathogenesis ascribed to each species of the intestinal worms, we must confess, with sorrow, that this error originally passed from physicians to the public, and now returns by the same path; as the laity torment us with the idea of mesenteric glands and worms at every enlargement of the infantile abdomen.

In children, a certain fulness and rotundity of the abdomen is physiological; and retraction of the abdomen belongs, especially in cerebral disease, to the unpleasant symptoms. I have observed its morbid enlargement;—

1. *In consequence of hypertrophy of the liver and spleen*, which, indeed, are often observable in the first moments of life, mostly in rachitic children. This hypertrophy very rarely occurs after intermittent fever, because the latter is seldom observed here in early life.

2. From *peritonitis*, mostly of a tubercular nature, which frequently occurs in children more advanced in years.

The abdomen is usually tense, percussion gives everywhere a dull sound; a physical exploration of the thorax and digestive organs gives suspicion of tuberculosis; the child frequently complains of pain in the abdomen, which is very sensitive to the touch; periodical febrile paroxysms occur, and, after a length of time, generally also exhausting diarrhœa.

Error is not common;—

3. In the *different varieties of ascites*; in consequence of impoverishment of the blood or dyscrasia, as after typhus; in scrofulosis or tuberculosis, after scarlatina and small-pox; in diseases of the heart, liver, spleen, and kidneys, in which external œdema also generally exists: and fluctuation, percussion, and the course of the disease, remove all doubt.

Mistake appears incredible;—

4. In distension of the abdomen from gas, which is the case in young children in consequence of the use of unwholesome broths, or from atony of the intestines, the result of chronic diarrhœa; since the strong tympanitic percussion-sound immediately explains it. I say this mistake is incredible; but it is made.

5. Cancerous tumors in the abdomen cannot easily deceive, since they very seldom occur in children, and when this is the case, this disease generally shows itself externally. In four years I only saw two cases of cancer in children, both in boys 4 years of age, whose parents were perfectly healthy; in one was a medullary cancer of the right eye; in the other, the left kidney had degenerated into a heavy mass weighing $2\frac{1}{2}$ pounds.

The diagnosis of these two diseases (worms, and tuberculosis of the mesenteric glands) is uncertain, at least from the complexity of symptoms hitherto designated, since this may belong to the most different diseases. When we find in the body of a child, besides a serous exudation, a plastic tuberculous deposit, tuberculosis of all the abdominal and thoracic organs, a cavity of the size of the fist in the brain (the latter I have already several times seen in very young children), who will wish to attribute all the phenomena during life to the simultaneously enlarged and tuberculated mesenteric glands, when they were neither the only nor the original cause of the symptoms?

I have often convinced myself, by autopsy, that the bronchial glands may be alone tuberculated with complete absence of tuberculosis in the other organs, but have found no case in which this was true of the mesenteric glands; on the other hand, I have often seen a high degree of general tuberculosis while these glands were wholly exempt.

In the year 1851, a child, 4 months old, was brought to the hospital, moribund. The mother was tuberculous, one of the sisters scrofulous; the child had drooped, coughed, had febrile paroxysms, was emaciated, respiratory murmur feeble, the abdomen large and soft. All together gave the idea of tuberculosis of the lungs, with a suspicion of the same process in the mesenteric glands. The day after, the child died, and the post-mortem verified both. A short time ago, a child of 4 months was brought to the hospital for examination. It had already suffered three weeks from a gastro-intestinal catarrh, and was very much reduced. It had been treated for mesenteric disease with cod-liver oil, baths of a decoction of walnut leaves, and inunction of different salves upon the abdomen. As children, in the matter of taking medicine, are generally devoted to the standard of homœopathy, so this one constantly left a part of the oil, vomited up a part, and only a small portion reached the stomach. Whether this operated favorably on the diseased gastro-intestinal canal, the reader may decide. The somewhat distended, soft abdomen, was certainly no sure sign of tuberculosis of the mesenteric glands.

The diagnosis of intestinal worms, in recent times, is determined by one certain symptom; namely, the discharge of the same. My observations have taught me that this certainly proves there were as many worms in the alimentary canal as have been discharged, but by no means justifies the use of the so-called vermifuges, except for the expulsion of the joints of the tape-worm; I am much inclined to believe that their discharge rather proves the existence merely of isolated enthelminths, since the intertwining of the convolutes, as I have seen them in the corpse, serves to retain them. I have seen, in the most different acute and chronic diseases, single round worms discharged by vomiting or stool, perhaps through the withdrawal of nourishment generally, or perhaps of that directly suited to these parasites, through means which occasionally expel them, or through an altered property of their medium, while no pathological alteration of the intestinal canal could be found, on postmortem examination. On the other hand, I have observed some cases where there were convolutes of ascarides in the intestinal canal with pathological alteration of the latter; and yet, neither by their expulsion or other signs could any suspicion of worms have existed.—*Med. Wochenschrift, Jan. 14th, 1854.*

Aneurism of the Aorta with Pneumo-thorax. By FRERICKS, of Breslau.

Among the diseases of the vascular system was a case of peculiar interest, that of an aneurism of the arch of the aorta, which had given rise to pneumo-thorax; a cause of pneumo-thorax, which, so far as my knowledge extends, had not hitherto been observed. This case presented great difficulty of diagnosis; and from whatever view I considered it, I remained in doubt till the autopsy set me right.

Anselm Rademann, a mason, 30 years old, was received in the hospital 5th May, 1853. For some weeks he had frequently coughed after talking

but was otherwise well and in his full strength, so that he pursued his labor uninterruptedly. No emaciation.

Early upon the 5th of May, without preceding illness, the patient suddenly threw up a considerable quantity of blood; the sputa continued bloody, and slight febrile excitations became observable.

An exact inspection of the thoracic organs gave the following result:

The left half of the thorax, which was a little sensitive to percussion, exhibited in the lower fourth a great dulness, which underwent no variation from change of position. From the horizontal border of the dulness to the very summit of the lung, the percussion sound was very full and deep over the whole left side, and the right half of the thorax presented nothing abnormal. Upon auscultating that portion where the dulness existed, no respiratory murmur could be heard; and above, as far as the unusually full percussion tone extended, nothing could be heard. Upon the right side a distinct and pure vesicular respiration was everywhere perceptible. The heart was in the normal position; its tones were clear, the rhythm of contraction undisturbed.

The patient made no complaint; he walked about, had a good appetite, and was only anxious in reference to his bloody expectoration. Our careful examination of his condition appeared to him enigmatical; he thought in a few days he should leave the hospital and return to his labor.

The question to be solved was, through what alteration in the thorax are these unusual results produced? The idea of a pneumo-thorax, favored by the full tympanitic percussion tone and the complete absence of every respiratory murmur, must appear doubtful; because there existed no metallic phenomena, no expansion of the intercostal spaces, no enlargement of the left half of the thorax, no obliquity of the stomach, and no dyspnoea. We therefore took into consideration the other possibilities which could explain these phenomena—as a plugging-up of the left bronchus, emphysema of the left lung, &c.; but each of these must again be abandoned, because rejected by sufficient reasons. It was only to be determined, therefore, whether the want of many of the symptoms usually accompanying pneumo-thorax—as dyspnoea, the metallic phenomena, the displacement of neighboring parts, &c.—could be explained in any other manner. Such an explanation presented itself to us, in the supposition of somewhat elongated ligamentous adhesions of the left lung.

We therefore fixed the diagnosis upon pneumo-thorax, with effusion into the left cavity of the thorax, and partial adhesions of the left lung. I observed beforehand, that the dislocation of the heart might become perceptible in a short time. Upon the very next day the heart was crowded to the right, and downwards, the displacement evidently produced by air, and not by fluid; since to the left, near the dislocated heart, was a full tympanitic percussion sound.

A second question was now to be solved; namely: what cause had induced the pneumo-thorax? Here, also, must numerous possibilities be considered, but no one was sufficiently certain. The right lung, which was alone accessible to examination, presented not the slightest abnormality, though ever so carefully explored. The idea of tuberculosis was the most probable; because it most frequently gives rise to pneumo-thorax, and because the hæmoptysis still further favored it. It was not to be concealed, however, that there was no sufficient ground for this opinion.

The patient took an infusion of digitalis, from which he found much relief, and urged his speedy discharge. The effusion in the left thoracic cavity increased; the other phenomena remained unchanged. Upon the 13th, at evening, the patient became suddenly restless, walked up and down his room in distress, was quickly attacked with an alarming hæmorrhage, which produced death in a few minutes.

A postmortem presented the following results: Calvarium, normal; a half-ounce of serum in the occipital fossa; nothing abnormal in the appearance of the brain or its membranes; larynx, trachea, bronchia, contain a bloody froth, otherwise normal; thyroid gland, healthy.

By puncturing the fourth intercostal space of the left side, air issues from the cavity of the pleura with a hissing noise; the diaphragm on this side is depressed strongly convex towards the abdominal cavity. After removing the sternum the greatest part of the left thoracic cavity is seen filled partly with fluid, partly with coagulated blood; the anterior part of the upper lobe of the lung projects over the space occupied by these substances. After removing the blood, which amounted to over five pounds, the lung is found attached in several places to the costal wall by ligamentous adhesions, through which were formed several vaulted, hollow spaces, filled with blood and air. Upon the pulmonary pleura no point of perforation is at first perceptible. The adhesions were carefully divided, and all the thoracic organs taken out together. Upon inflation, some air issued at several points of the upper lobe, yet the fissures are scarcely perceptible. The parenchyma of the upper lobe, with the exception of the anterior border, shows recent sanguineous infiltration, like a saturated sponge, very lacerable—the lower lobe compressed, its bronchia filled with coagulated blood. The right lung partially suffused with extravasated blood, otherwise normal.

In the pericardium some clear serum; the valves of the heart normal, the cavities void of blood. The ascending aorta shows slight atheromatous degeneration; at the arch is a constriction, and behind this a sac lying forwards and to the left, of the size of the fist, which is bounded everywhere exteriorly by the interior surface of the superior lobe of the left lung, its inner surface being covered with smooth, laminated coagula. In the proximity of the ascending aorta the arterial coats of the aneurysmatic sac may be distinguished entire; farther on they become imperceptible; and at several points the parenchyma of the lung is reached immediately after the removal of the membranoid fibrinous layers. At one point near such a breach is found a bronchus with thin walls, rent, and in communication with the aneurysmatic sac; the bronchus runs a distance near the aneurysm, and is here only separated from it by a thin, lax layer of fibrine, not by a firm membrane. A rent of the sac exteriorly, or other communication of a blood-vessel with the pleural cavity, does not exist. We must admit that the blood passed from the aorta into the pulmonary parenchyma, and from thence through the laceration of the pleura into the cavity of the thorax. On the other hand, the air must have entered the thoracic cavity through the torn lung-parenchyma.

No important alterations in the abdominal viscera.—*Med. Wochenschrift (Vienna)*, Jan. 7, 1854.

CHEMISTRY, TOXICOLOGY, AND MEDICAL JURISPRUDENCE.

The case of Seward vs. Housley.—We have frequently been compelled to deplore the culpable laxity which prevails in our courts of law, whenever an arrant quack or impostor is prosecuted for manslaughter. The verdict is almost invariably given in favor of the accused, and this is usually done under the direction of the presiding judge, and with the concurrence of the bar. An ignorant bone-setter undertakes to set a broken limb, and the patient is lamed for life; an uneducated midwife tears out the bowels of a parturient woman, supposing the intestine to be the placenta; a patient is purged to death by the drastic drugs of one scoundrel, or allowed to die under the homœopathic globules of another; and scores of victims are hurried to their last account by enormous doses of lobelia and cayenne pepper. It is true, that in some of these cases the offenders are made to appear at the bar of justice; but the result in all is precisely the same, namely, a triumphant acquittal, and the accused parties become martyrs in the eye of the public.

But let us reverse the picture. A gentleman who has been regularly educated for the profession, who has passed the necessary examinations, and who has been in actual practice for seventeen years, unfortunately meets with an unsuccessful case; and forthwith he is made the subject of an action at law; and the judges and the juries who would have at once acquitted the quack, the bone-setter, the midwife, the homœopath, or the lobelia-doctor, exhibit their virtuous indignation against alleged malpraxis, and their zeal for the public welfare, by awarding vindictive damages for the plaintiff.

Such a case as that to which we now most reluctantly allude has lately been tried in one of our courts of law. The plaintiff in the action is an infant, who of course sues by her next friend; and the defendant is Mr. Housley, a most respectable practitioner in this metropolis. It appears that this infant, being nine months old, fell out of bed and injured its leg, and that Mr. Housley, who was the medical attendant of the family, was called in to see it. He ascertained that the thigh was fractured, and he accordingly placed the child upon a pillow. On the day following the accident, he and his assistant set the bone, and bandaged the whole limb from the toes upwards. About the seventh or eighth day afterwards, a blister was observed on the toes of the child, according to the statement of the mother; and when Mr. Housley's attention was drawn to this circumstance, he cut the bandage, remarking that he must remove it if the appearances became worse. On subsequent occasions, the bandage was removed, poultices of linseed-meal and bread were applied, nourishing food was administered, and it was ordered that the limb should be kept warm. Gangrene, however had commenced, and was rapidly proceeding, until at length Mr. Erichsen was called in, who advised and performed amputation of the leg below the knee. For the loss of the limb thus occasioned, the action was brought; and another action was brought at the same time for the expenses to which the father had become liable in the progress of the case. The jury, after a short consultation, gave a verdict for the plaintiff—damages, £200; and in respect of the second action, they awarded £50 to the father. We need not state that the costs would most probably amount to as much more.

Now, as we have no knowledge of the case beyond that which we have

derived from the accounts in the newspapers, we are in no condition to argue upon the pathological questions which may be involved in this very lamentable transaction; and we do not venture, after the direct evidence of Mr. Erichsen, who was called for the prosecution, and the admission of Mr. Arnott, who was called for the defence, to question the fact, that the undue tightness of the bandage was the cause of the mortification, and consequently led to the ultimate loss of the limb. There may, it is true, be some doubt whether the gangrene was not due to arterial disease or injury; but, as we have just observed, we are ignorant of any but the published details of the case. It appears, however, that the infant was a feeble and puny child, and, of course, peculiarly liable to symptoms which a more robust constitution might have enabled it to resist.

But in the treatment of the fracture by Mr. Housley, we can find nothing to censure. He lays the child upon a pillow, and he subsequently sets the fractured limb; he places cotton-wool next the skin; over this he places a bandage, including some chips of a hat-box cut to the length of the thigh; over these he lays gutta percha, so as to obtain a correct model of the limb, and then he secures the whole with a roller. Supposing this to be the correct statement of Mr. Housley's proceedings, and we have no reason whatever to doubt that it is so, what surgeon, we venture to ask, would for a moment doubt the correctness of the treatment? It further appears, that the limb having been thus set, and the bandage, the splints, and the gutta percha, having been thus applied, the child was visited at regular intervals by Mr. Housley; and, as he did not perceive any thing amiss with the limb, he very properly refrained from disturbing the arrangements. As soon, however, as his attention was drawn to the fact, that a livid appearance existed in one of the toes, he cut the bandage up to the knee, ordered the limb to be kept warm, and nutritious food administered. The child was seen every day, and the nourishment was continued, together with port wine and aromatic spirits of ammonia. Notwithstanding this treatment, however, the gangrene extended, and amputation was rendered unavoidable.

Now, admitting as we do, that the mortification was probably caused by the tightness of the bandage, yet may it not be urged, as was done by Mr. Housley, that, without any fault of his, the bandage may have become displaced by the natural restlessness of a child so young, and thus have led, in a feeble constitution, to gangrenous mischief? But, even if we allow the whole weight of culpability to fall upon Mr. Housley, to what does it amount? Why, simply to this: that having, in his zeal for performing his duty efficiently, and for preventing the displacement of the broken ends of the bone, applied a bandage firmly and continuously to the whole limb, this pressure, exercised upon the textures of a feeble and delicate child, gave rise unexpectedly to mortification. Even admitting an error of judgment on the part of Mr. Housley, does it appear, from a tittle of the evidence, that he acted carelessly, roughly, or imprudently? May it not rather be inferred, that the unfortunate circumstances that ensued might have taken place under the hands of any other surgeon, and that they were due rather to the feeble constitution and restlessness of the patient, than to want of skill on the part of the medical attendant?

Let us take the case of a person who is operated upon for cataract: the operation is skilfully performed, but, from the irritability of the patient, or

from the badness of his constitution, inflammatory action is set up in the eye, and vision is destroyed. Would it not be monstrous to make the surgeon responsible for the unsuccessful termination of such a case, and to visit him with overwhelming damages, which not only drain him of his pecuniary resources, but also blight and wither his professional prospects?

Now, let us exhibit an instance in contrast to the persecution of a regularly-qualified member of our profession. In the early part of the last year, a fellow named William Hobson Palmer, described as a *botanist* (?), but who possessed no medical qualification whatever, was charged with the manslaughter of a female, by administering to her enormous doses of lobelia and cayenne pepper. It was proved that the prisoner administered the poison; it was proved that the patient died from its administration; it was proved that the prisoner was wholly ignorant of the science he pretended to practise; and, *therefore*, he was triumphantly acquitted under the direction of the presiding judge.

"Look here upon this picture, and on this." An arrant quack is clearly proved to have caused the death of a fellow-creature, by administering poisonous drugs of which he knew little, for the relief of a malady of which he knew less; but, *because he is ignorant*, he is declared free from all blame, and is again sent forth to practise his baneful arts upon a credulous and deluded public! On the other hand, a well-educated surgeon has a case which, although treated according to approved rules, terminates unfavorably; and, without making any allowances for the feebleness or other circumstances of the patient's constitution, or without making any fair concession for the fallibility of human nature, a British judge and jury pronounce a man guilty of dereliction of duty, and award against him an amount of damages, cruel in themselves, and which involve in their consequences the destruction of his professional practice and the embitterment of his future life!

We trust that Mr. Housley will move for a new trial.—*Medical Times and Gazette*.

MATERIA MEDICA, PHARMACY, AND THERAPEUTICS.

French Therapeutics.—In these days of the printing-press and the steam-engine, when treatises pour forth on all sides, and the journey from London to Paris may be made in six hours, it must be matter of astonishment to any observer how slowly knowledge spreads. Throughout the British Isles there is probably scarcely a single physician of note who does not believe in the curability of pulmonary phthisis,—frequent in its early stages, occasional even in its later. Nor is there, probably, one who does not recognize the grand principle of treatment as consisting in the use of a tonic and restorative system of diet, combined especially with the employment of fish oils and other hydro-carbons. Will it be believed, that within a few days of the present time, before the Academy of Medicine in Paris, an essay has been read by one of the most expert physical diagnosticians in Europe on the treatment of phthisis, entering elaborately into the various branches of the subject, without the slightest mention of cod-liver oil, or of any substitute for it? Further, M. Piorry's paper was freely and fully discussed by the learned body to whom it was read, and it forms the subject

of a four-columned criticism in last week's *Gazette Médicale*; yet the omission in question has been hinted at by none. The renowned physician of La Pitié, who appears all but to despair of cures, has amused himself by measuring in centimetres, from time to time, the area of dulness on his patients' chests, the treatment meanwhile consisting in iodine inhalations, aided, when the case seemed to require it, by tartar emetic (internally administered), bismuth, phosphate of lime, quinine for the hectic, and opium for the cough. He was led, he states, to hope that iodine inhalations might induce healthy processes in tuberculous disorganization of the lungs, from having noticed the effect of injections of that drug in hydrocele and scrofulous abscess of the testis! In the discussion, one of his critics insists much on the value of the fumes of the arseniate of soda; and another on the extreme benefit derivable from the prolonged administration of the tartarized antimony; a third talks of the antagonism between phthisis and goitre, and argues thence that iodine ought not to cure both; while a fourth contents himself in finding fault with M. Piorry's nomenclature. This is not the only startling illustration which we have recently had before us of the utter incompetency of our French brethren in dealing with matters of therapeutics. The last number but two of the *Gazette Médicale* contained a learned and lengthy dissertation, announcing the discovery that venesection is not always required in hæmoptysis! Can nothing be done in these times of French and English fraternization to remedy such disgraceful ignorance on the most important subjects? Might it not be well to raise a subscription, translate Dr. Hughes Bennett's last book, and distribute it gratis to the French faculty? Or, perhaps, the end might be gained if the Brompton Hospital would invite the Académie de Médecine over for a visit. The man who, having witnessed for a week the practice of either of our Metropolitan Institutions for diseases of the chest, could go back and deny to his phthisical patients, by batches of thirty-four at a time, the use of cod-liver oil, and subject them solely to iodine inhalations, would merit for his inhumanity to be dismissed the profession, and discarded from society.—*Medical Times and Gazette*.

PRACTICAL MEDICINE AND MEDICAL PATHOLOGY.

Cerebral Tumors. By Dr. EULENBERG, of Coblenz.

Case I. A butcher, 31 years of age, otherwise perfectly healthy, father of three children, had several tumors under the chin and in the left submaxillary region. These tumors were extirpated in July, 1852. At the end of the same year, two new tumors formed beneath the chin, exactly in the cicatrix, of the size of a hazel nut, which were movable, uneven, and tolerably hard. Several smaller ones were found in the left submaxillary region, upon the left cheek, upon the back, and upon the inner side of the left thigh. The patient consulted a physician on account of an intense pain involving the left half of the head, which extended from before, just above the eye, backward to the neck, and was most endurable in the recumbent posture. He was disposed to maintain a stiff position of the head. It could be moved passively, however, in all directions. Several years ago, a pain commenced in the right arm, which, to the patient, seemed palsied. All

the other functions were normal. After a period of 14 days, the patient could separate his teeth only three-fourths of an inch. His head seemed to become constantly heavier, in consequence of which he was accustomed to lie upon his left side, and in the erect position to support it with the hand. The tumors upon the body grew without becoming painful. The pupils, the appetite, sleep, and the mental functions continued normal. Toward the end of January he lost his appetite; the feeling of weight in the head became more troublesome; drowsiness came on, and constipation, but no fever. In the beginning of February the trismus was so severe that the patient could take only fluids. There was indifference and a want of emotion, but no delirium. His strength was prostrated; there was an almost constant somnolency; the respiration was slow; the pupils were somewhat dilated, and re-acting feebly; and the pulse slow. During the last three days, obstinate constipation and involuntary discharge of urine occurred. Twenty-four hours before death, palsy of the right side came on, with total loss of consciousness, and spasms of the right half of the face. Death took place on the 21st of February.

Autopsy. The dura and pia mater were much congested, and the arachnoid was somewhat opaque. In the anterior left lobe of the brain, in the course of the fossa Sylvii, a thick cyst was found, $1\frac{1}{4}$ inches long and $\frac{3}{4}$ of an inch broad, which lay with its superior half imbedded in the brain, and adhered to the dura mater from within to near the left foramen opticum. The cerebral substance at the periphery of the cyst was somewhat softened to the depth of one line. The cyst, which had the thickness of the dura mater, consisted of fibrous tissue, contained a yellowish, opaque, albuminous fluid, and was lined on its inner surface with epithelium. Beneath this, and inwards, lay a lobular, reddish, and soft tumor, similar to the substance of the brain, of the size of a pigeon's egg, which was connected by uniting tissue with the brain and the cyst as far as the left foramen opticum. On bisecting this tumor, a nucleus was found in its centre, 5 lines long and 4 broad, which consisted of whitish fibres running parallel, and everywhere surrounded by a soft, reddish, lobular substance, from 4 to 6 lines in thickness. Otherwise the brain was normal. The thoracic and abdominal cavities were not opened. The tumor beneath the chin, which was of the size of a hen's egg, lay in the subcutaneous cellular tissue, and was easily enucleated. It consisted of a yellowish white, tolerably soft, lobular mass, of glandular-like texture (Pancreatic tumor of Abernethy). The latter showed, under the microscope, egg-form cells, with large nuclei predominating, also fat cells and minute fat globules. The cells were either isolated, or connected by amorphous blastema. A few undeveloped fibres could also be seen, which disappeared upon the addition of acetic acid. At the central portion of the nucleus of the cerebral tumor, fibres almost exclusively were found, and a very few cells nearly spindleform. Towards the periphery, cells of an irregular, roundish, and angular form, with imperfect nuclei, were predominant; they everywhere clung thickly together, and thus resembled pavement epithelium. Near the surface the fibres were almost entirely wanting, and cells of an elliptic form, with large nuclei, were chiefly to be seen. Upon the whole surface of the tumor was found much amorphous blastema, with many fat granules, fat cells, free nuclei, and nucleoli.

Case II. A girl, 16 years of age, had had epileptic attacks since her fourth year, which never occurred while standing, but always after lying down at night. The patient was, corporeally and mentally, immature; she could scarcely read or write; but, constantly smiling, exhibited a simple, child-like demeanor. She was pale and emaciated; had frequent vertigo, and frontal headache. The other functions were normal. In the last four weeks of life, the patient manifested great indifference; somnolency, with a slow pulse, were present. Eight days before death there was paralysis of the left half of the body; the epilepsy ceased, but somnolency occurred almost constantly, with involuntary discharges of urine and fæces.

Autopsy. The dura and pia mater were congested. A fluctuating motion in the right hemisphere of the brain was observed, at the highest part of which, and nearly corresponding to the parietal tuber, the cerebral substance was so thin that a watery fluid could be seen beneath it, as through a thin membrane. Upon the removal of this thin cerebral lamina, a crystal fluid issued, which had occupied the hemisphere to the lateral ventricle of this side. The right corpus striatum, the thalamus nervi optici, the pes hippocampi major and minor, formed the floor of this cavity, which was lined by a serous membrane. The fluid exhibited under the microscope no organised constituents. The left half of the brain was normal. The inner surface of the skull was studded with pointed wart-like osteophytes. At all these points, as well as at the sides of the coronal suture, the skull was thickened. In the intervals of the osteophytes, the bone was diaphanous. Near the left anterior angle of the right parietal bone, upon its inner surface, was found a depression of the size of a penny, which was surrounded, as with a wall, by thickened bone, and was covered only by pericranium, being a hole in the bone. A similar atrophy of bone was found at the upper part of the os occipitis; and at the point between the pericranium and dura mater was deposited a dirty, yellow, greasy, caseous mass; the bony margin was here porous, unequal, and very much thinned, for two or three lines in width; the contiguous internal osseous surface was less thinned, rough, and unequal, porous at certain points, and studded with osteophytes.—*Schmidt's Jahrbücher.*

PART IV.—HOSPITAL RECORDS.

The limited space available for this department in this issue, necessarily curtails what might be said on the Medical and Surgical practice of the last two months; the following cases, however, are not without their peculiar interest and importance.

WARD'S ISLAND.

In the obstetric wards there has occurred a very smart epidemic of puerperal peritonitis, which has at length fortunately subsided. Its connec-

tion with, or dependence on, the atmospheric condition has been well marked,—its commencement and alternating course following the sudden and inclement changes which have characterized the season. The cases did not admit of depletion; the only one in which general blood-letting was had recourse to, died. Local counter-irritation, warm enemata *per anum et per vaginam*, opium in moderate doses, calomel, and sufficient diet, with absolute rest and quiet, have proved very efficacious.

Erysipelas prevailed among the children, extending, in some cases, to the parturients; attacking, in the latter, principally the head and face, and upper portion of the trunk. The free use of quinine, muriated tincture of iron, and generous diet, was most successful in arresting the progress of the disease. Tonsilitis, of an acute character, attacked many of the infants, accompanied in some cases with pneumonia.

Puerperal convulsions have also proved frequent. One very severe case in a plethoric woman, was followed, a few days after delivery, by peritonitis. The paroxysms were controlled by chloroform, which was found to be, in all the cases, a powerful remedial agent. By its timely administration on the first premonitory symptoms of the paroxysm, the attack was cut short, and a period of sleep and quiet ensued, affording opportunity for applying the other medicament treatment. An occasion offered itself for testing Dr. Marshall Hall's theory. It will be remembered that in the course of his lectures, delivered in this city, he stated that he found that on leaving those animals on which he had been experimenting perfectly undisturbed in a dark room, they frequently completely recovered, while those with which the experimentation of excitation was continued, or frequently repeated, were sure to die. Acting on this principle, Dr. Cox strictly prohibited the attendants from handling or disturbing the patient, even during the violence of the spasm, care being taken, however, to prevent her from falling from the bed; it was observed by him, that the slightest touch was sufficient, in some patients, to induce a violent paroxysm, at a time when they were comparatively tranquil. Chloroform was employed continuously in these cases, during varying periods of time, extending, in the one referred to above, to twenty-two hours, with the happiest effect; and in no instance has he been able to trace any unpleasant consequences resulting from the remedy.

There may be seen also in these wards a woman, now moving about and acting as a nurse, who five months ago was paraplegic after delivery. This case was also seen by Dr. M. Hall, whose prognosis was that she would recover the use of her limbs probably in eighteen months—a steady persistence in the administration of strychnine and *the use of the muscles*, has verified this prognosis in a shorter period of time.

It is certainly most pleasing to visit these wards; the cleanliness, com-

fort, and order observable, reflect the highest credit on those in charge of them, while the evident expression of grateful contentment exhibited by the patients, proves how completely they appreciate the noble provision made for them in their hour of need, and the just estimate they form of the skill and kindness displayed in their treatment. To the student who will take the pains to embrace the opportunity afforded him for the acquisition of practical knowledge, the advantage of the clear, fluent, and pointed commentaries of Dr. Cox is invaluable; one cannot avoid feeling some regret while listening to him, that his careful observation, great experience, correct diagnosis, and scientific treatment, are not applied in a more extended manner as a teacher.

In the Medical Wards, the same order and cleanliness prevail, and there is a wide range of disease to investigate. There have been many cases of pleuritis, in several of which the pathognomonic auscultatory signs have been most distinctly marked and presented good lessons of stethoscopic diagnosis. There were also two very interesting cases, of somewhat obscure character. One presenting a nice point of diagnosis in valvular disease of the heart, but to this we shall have occasion to refer again; in the other, an enormous aneurism was detected in the cavity of the thorax, which has proved fatal; and the postmortem appearances it will be our privilege to give in our next. The characteristic bruit was, if perceptible at all, very indistinct.

In the Surgical Wards there is a female patient wearing a tracheal tube, which was inserted five years ago in Dublin, for some affection of the upper part of the trachea, impeding respiration. We have not as yet been able to make ourselves acquainted with the character of this disease, and at present only allude to the case, as possessing some interest from the length of time which the tube has been employed with manifest advantage. She is anxious to know whether something cannot be done to obviate the necessity for its use.

On the 24th ultimo Dr. Carnochan performed amputation of the shoulder-joint, in a case of osteo-sarcoma of the os humeri; and up to the date of our going to press the patient was progressing favorably. A native of Ireland, 34 years of age, a stone-cutter by trade—he is unable to say whether, in the collateral branches of his family, the cancerous diathesis has exhibited itself. He represents himself to have been always stout and healthy, with the exception of occasional rheumatic attacks, which he thinks principally invaded the affected arm. He came to this country three years ago; during the passage out, he received a blow on the arm from a hand-spike; on the subsidence of the tumefaction consequent on the injury, he observed a small tumor, apparently confined to the integument. He has at various times subsequently employed, under advice, several topical applications. The growth of the tumor was for some time very gradual; within

the last eighteen months, however, it began to increase more rapidly, and attained its present enormous dimensions within five months; its progress being much accelerated lately, he thinks, by the escharotic applications made to it by some female charlatan, to whom he was induced to apply for treatment. The disease involves the two upper thirds of the humerus; the limb being, at the most prominent point, about three diameters and a half, as compared with the healthy arm. Its surface was lobulated, and it was pendulous on the posterior aspect of the arm—of a livid hue on the prominent points, and presenting a somewhat fungating opening posteriorly, occasioned by the caustic applications, from which copious bleeding had recently taken place. His debilitated condition, much aggravated by the hæmorrhage, the irksomeness of the disease, and desire of relief, induced him to seek for the operation, to which he had at a former period objected. The arm below the disease, forearm, and hand, were very œdematous. The great weight of the limb had drawn down the shoulder; and the prominence of the disease immediately around the head of the bone gave to it the appearance of displacement; the disease extended completely up to the axilla, and presented, in every direction, grave obstacles to the operator. Happily there was abundance of healthy integument from which to form flaps. It had been suggested, in order to control the hæmorrhage, to pass a ligature under the subclavian; this was accordingly done above the bone. A small roller compress was then placed over the vessel, and the ligature tightened on this by a single turn; the whole being kept in situ, and the ends of the ligature guarded, by an assistant. Commencing his incision at a point a few lines above the prominence of the joint, Dr. Carnochan continued it down for some distance in the mesian line, and then diverging to the posterior aspect of the arm extended the line to the axilla; with a semilunar curve, he continued the incision on the internal and anterior aspect to the point of divergence. The flaps were then dissected off superiorly and laterally sufficiently to permit the disarticulation of the bone. The joint was then easily entered. The dissection of the inferior portion of the tumor was then proceeded with, and at this stage of the operation the brachial vessels were divided. The venous hæmorrhage was most copious—the tumor itself evidently holding a large quantity of blood. There were one or two arterial jets from superficial anastomotic branches, much enlarged; these were, however, controlled by the assistants. The glenoid cavity, corocoid and acromion processes, as also the extremity of the clavicle, were found to be healthy. The axillary vessels were then secured, the ligature on the subclavian slackened, the flaps brought together, and the stump dressed. The weight of the arm, about an hour after removal, was found to be eighteen pounds two ounces. It has fallen to our chance only once before to see so large a mass of disease affecting a single bone in the living subject. It was

of the same nature, and involved the whole of the scapula, the patient died without operation.

Prevented by want of space in this number, the writer of this department of the MONTHLY claims the right and reserves to himself the privilege of commenting on and replying to a passage in the paper published in last month's issue, entitled "Dr. March and his Reviewer," in which an attempt is made to ridicule and cast doubt upon a statement made in the report of Dr. Carnochan's treatment of morbus coxarius.

PART V.—EDITORIAL AND MISCELLANEOUS.

THE MORTALITY AT SEA.—The extraordinary mortality at sea which has prevailed during the past fall, and which, even during the earlier winter months, numbered its victims by scores, is awaking attention in the right quarter. Abroad, "the Thunderer"—the *London Times*—has hurled its demand for a reform; and after it, almost of course, the whole secular press takes up the cry. At home, the press has also been busy, and by much clamoring has succeeded in directing the attention of Congress to the subject. On motion of Mr. Hamilton Fish, in the United States' Senate, a select committee has been appointed to consider the whole matter of the late sickness on the sea, to investigate its nature and causes, and report such action as they may deem necessary. The members of this committee we are assured have gone earnestly to work. They early called, by circular and private letters, upon physicians and surgeons who they presumed might be posted on the subject, upon shippers and masters of vessels engaged in bringing emigrants to the States, and upon all from whom the needed information was likely to be obtained. The following circular indicates the points to which they have already had their attention directed :—

SENATE CHAMBER, WASHINGTON, Dec. 29, 1853.

SIR,—A select committee, appointed by the Senate of the United States, to inquire into the causes and the extent of the sickness and mortality prevailing on board the emigrant ships, have instructed me to obtain the opinion of gentlemen of experience and of professional knowledge, both with reference to any deficiency in the provisions of the existing statutes, and the propriety of further legislation.

In conformity with their direction, I take leave to ask your opinion as to the adequacy of the existing laws with respect to :

I. The space allotted to each passenger.

II. The quantity and the quality of the provisions required for each passenger.

III. The permission allowed to the passengers to furnish their own provisions for the voyage, instead of making it, in all cases, the duty of the master to provide them.

IV. Ventilation.

V. The cooking arrangements.

VI. The duty of the master to enforce personal cleanliness, and to insure the cleanliness of the vessel.

The Committee further request your opinion as to the propriety of amending the existing laws by requiring—

VII. The employment of a qualified and experienced surgeon.

VIII. The employment of a reasonable number of attendants to minister to the sick, and to enforce the observance of cleanliness, both of the persons of the passengers and of the vessel.

IX. The separation of the sexes; and the prevention of unnecessary intercourse between the crew and the passengers.

X. A thorough process of disinfecting every vessel, on board of which disease has once made its appearance.

XI. A report to be made, by every vessel bringing emigrant passengers, of the length of voyage, number of passengers, number of deaths, &c., to be published, and to be returned to the State Department.

XII. In case deaths have occurred during the voyage, an inquest to be held under the supervision of Federal officers, and the verdict to be published and returned as above.

XIII. A limitation to the number of passengers allowed in any vessel, in proportion to the tonnage of the vessel.

XIV. A distinction with respect to the number of passengers between vessels passing within the tropics, and those not so passing.

The Committee will also be happy to receive from you any statement of facts within your knowledge, tending to exhibit the extent, or the causes, of the sickness and mortality which have prevailed, or the insufficiency of the provisions of the existing laws, as well as any suggestions which you may think proper to make in connection therewith, or with regard to the proper remedy to be applied.

An early reply, with answers to any or all of the points above suggested, will be esteemed a favor.

Very respectfully,

HAMILTON FISH, *Chairman.*

The Committee is certainly on the right track. There is much reason to hope that it will prosecute its investigations faithfully, and that something will be done to stay this terrible plague. We confess, that we are not without doubts as to the radical nature of the reform that will be wrought. The Committee is earnest enough, Congress is willing enough, and Humanity is on her knees, pleading piteously for it. But here the interests of Humanity and of Commerce conflict, and "Commerce is king."

The alterations in the system of bringing emigrants which are mostly needed, will commend themselves to all who have given the subject much attention.

The very first need of the emigrant on this "middle passage" is *more room*. In fair weather, when the hatches and air-ports can be open, it is not so much matter. But when they are closed, he might as well be screwed down in an air-tight coffin to weather a storm, as expect with comfort or health to breathe in the small number of solid feet that the present law allows. The space should be doubled at the least.

A fixed amount of good food, carefully inspected as to both quantity and quality, on starting, and the balance of it also on reaching port,—it should be made the duty of the vessel to furnish. Passengers should not

be allowed to "find themselves" on the passage, since that art they never yet have learned at home. Inasmuch as during a severe storm it is often difficult to keep the fires burning, a portion of the supplies should be already in the cooked state, which should be fed out so long only as cooking on board is impracticable. Arrangements for cooking should be made much more ample than at present, and strict enforcement be required of the rules fixing the extent to which food shall be cooked.

Ventilation of the steerage should be insisted on. It certainly should be possible, if deep mines, into which no ray of sunshine ever penetrates, can be ventilated. By using iron in the place of wood to construct berths of, and by a free use of windsails, there can be no difficulty in the matter.

Every emigrant ship should be compelled to take out a competent surgeon. Under existing laws, the surgeon is apt to be but a poor vagabond, taking to the sea simply because he cannot make a living on land. The British law forbids a British vessel to clear from Liverpool without a graduate of some British school on board; and the pay for the graduate's services is the exceedingly liberal one of £20 per voyage, drinks excluded, and a free passage back! As there is an abundant supply of worthless surgeons with British diplomas in their pockets, or, on an emergency, never a lack of a diploma to be leased by somebody long enough for the pretended surgeon to clear the ship from the dock, though he should return with the pilot-boat to shore and save the ship his board, and as it is not particularly the interest of the vessel to be provided with a surgeon either good or bad, the fees are kept so low for his services, that no man whose time is worth much or his reputation worth saving, can afford to accept the berth. Now, if Congress will give England a taste of her own prescriptions, all parties will be benefitted. Let it be enacted that no American ship shall leave Liverpool with emigrants unless accompanied by an educated American surgeon, and our ships will be obliged to *take out with them* surgeons. But few Yankee graduates are to be found who will cross the ocean more than once at a salary of an hundred dollars per trip,—the price would soon rise to the proper standard. But it need not be left to find its standard. Let the surgeon be paid *so much*, for every man on board *who is landed alive*; so, compelling him, by a means which even those who are destitute of a conscience respect, to study the health and life of every one on board.

The officer must be very deeply depraved who would conceive it, yet there have been those who have openly said it, when the miserable beings were dying at almost every hour of the day—"Let them die,—for each one there is so much less commutation to pay on landing." Laws are made for rascals,—let the commutation paid on landing, to the Commissioners of Emigration, be at so much for every one *leaving* the Transatlantic port, or born on board, instead of the same sum for every one landed. It would remove this miserable temptation from the path of contemptible avarice.

When sickness breaks out, the invalids should be removed at once to another part of the ship—a temporary hospital set apart for them; nurses should be assigned to their care; and others should be set to clean the vessel at once. The master should have power put into his hands, when the surgeon pronounces it necessary, to order all persons on deck, to enforce bathing, washing, and a change of clothing; to oblige each to keep his portion of the steerage in decent order; and for simply performing his duty faithfully, he should have immunity from the fines and punishments of the courts. Such is now the certainty of punishment to the officer who, when

he knows that his whole ship's burthen of lives depends upon his firmness in compelling a few refractory sea-sick persons to come out of their noisome styes into the air, does his duty in the gentlest manner, that it is customary for such, when they find they are arrested, not to plead the necessity of the case, which blind justice ignores; but to plead guilty, confess to a sudden paroxysm of passion that may not have been felt, and ask the court's indulgence. For knocking a man down when in a towering rage, our courts reprimand and, gently, fine one; for laying hands ever so gingerly, if firmly, on a stubborn passenger, whose laziness endangers the lives of all the rest, it has a dungeon and smarting damages.

If, however, there is a death on board, there should be an inquest held; the deceased should be carefully described; his little property accounted for; and upon reaching port, every ship should be required to render a faithful report of its experiences, the number of sick, and when taken down, and the number of deaths, if any, with the causes of death as found by the inquests. To verify or prove these reports, inspectors here should board the vessel, and note its condition, the quality and quantity of food on board, its sleeping arrangements, and what facilities are furnished for the removal of filth and the preservation of cleanliness. Nor should she be permitted to leave port again until the inspector—a man competent and true, whose fees or continuance in office shall as little as possible depend upon the goodwill of shippers—declares her entirely free from all possible infection.

Means should be taken to separate the sexes, and to put the visits of the crew to the steerage under far greater restrictions. The miserably depraved physical condition of emigrants on ship-board, is but a type of the moral depravity they suffer. Many who start with some regard for the moralities and decencies of life, land utterly shameless and abandoned; and many who leave their homes as pure as they are poor, and as innocent as destitute, reach our shores lost prostitutes. Noble preparatory schools, these, for American citizens! beautiful seminaries for the training of American mothers! But it is cheap; passage-money to the new world is £2 10s., or, for a crack chance, £3! Such cheapness is loathsome when we think of the sickness and death, immorality and crime, that it genders. The whole subject being now before Congress, upon it devolves the duty of enacting a thorough reform. If it cannot be done without raising the price of a passage hither, and diminishing the amount of our immigration, even those tremendous inflictions we will try to be resigned to, though greedy shippers may not find it so easy. If Congress will pass laws embodying some such changes as we have indicated, we have little doubt that many a year will intervene before the angel of death will again be seen hovering so continually over the track of our emigrant ships. Humanity will be spared many a bitter tear; and if the cholera should visit us during the coming fall, we shall have a better conscience to speak of it as a visitation appointed by inscrutable Providence. ††

CORRIGENDA.

Will our readers correct the following errors in this and the preceding number of this Journal?

p. 191, line 3, for *Porsal* read *Portal*; for *Desanes* read *Desault*.

“ “ 4, for *Firske* read *Fricke*.

“ note §, for *Porsal* read *Portal*.

p. 250, line 18, read *twenty-one* instead of *eleven*.

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PART I.—ESSAYS, MONOGRAPHS, AND CASES.

The Physiology of the Fœtal Circulation. By E. R. PEASLEE, A. M., M. D.,
Prof. of Anatomy and Surgery in the Medical School of Maine.

FŒTAL Anatomy has, for several years past, received a large share of attention, while foetal physiology has hitherto been, to a great extent, neglected, except so far as mere development is concerned. It is, indeed, a department of no ordinary difficulty, since the human foetus passes through various successive phases of function, as well as development. In regard to its circulation, for example, it is at one time analogous to a fish; subsequently to a reptile; and does not become a true mammal, indeed, till after birth.

Still, we may now enter this field with views somewhat extended; and it is the object of this paper to show that the view of the foetal circulation, which is adopted by the highest authorities, is unsatisfactory and incorrect; and to propose such a view as the present state of science demands.

In this view the last half of foetal life alone is included; and it is proper to commence with a statement of the ideas, both in regard to the course and to the physiology of the foetal circulation, which are generally entertained.

I. *The course of the Fœtal Circulation.*

About 150 years ago a violent controversy arose in France, and extended to the neighboring kingdoms, respecting the manner in which the blood passes between the auricles, through the foramen ovale.* It was excited by Meri's

* For the arguments adduced in this controversy, see Senac's *Traité de la Structure du Cœur*, tome 1, p. 369; and the Supplement, in tome 2.

theory—that it passes from the left to the right auricle—while Harvey had assigned to the current an opposite direction. Boerhaave, Lancisi, Winslow, and others, investigated the subject; and their conclusions have undergone but slight modifications up to the present time.

The course of the foetal circulation as usually stated—independently of the inferences generally associated with the facts—is as follows:

1. The aerated, or arterial, blood returned by the umbilical vein, from the placenta through the umbilicus, and to the inferior surface of the liver, is thence poured into the inferior vena cava; a part having entered that vessel at once through the ductus venosus,* and the rest having first been transmitted through the liver.

2. The blood in the inferior vena cava is poured into the right auricle, and by the *Eustachian valve turned across into the left auricle through the foramen ovale*.

3. While the left ventricle is thus filled, the right is *filled by venous blood*, from the superior vena cava.

4. The mostly *arterial* blood is sent from the left auricle through the left ventricle into the aorta, and *principally through the branches from its arch* to the head and upper extremities; the *venous* blood in the right auricle is sent through the right ventricle into the trunk of the pulmonary artery; thence in very *slight degree* to the collapsed lungs, but *almost entirely* through the ductus arteriosus into the descending aorta—there to mingle with the *purser* blood which has passed down through the arch of the aorta. 5. This mixed blood is distributed to all the parts supplied in the adult by the descending aorta; and the blood thus carried to all parts below the diaphragm is returned to the right auricle by the inferior vena cava. 6. But the internal iliac arteries are not only distributed in the foetus as in the adult. They are also prolonged on each side of the bladder, and above it to the umbilicus, and through the latter into the cord, and to the placenta. These prolongations are called the “umbilical arteries;” and by them the blood is returned from the foetus to the placenta.

This view is illustrated by Fig. 1, here taken from Carpenter's Physiology; and which is placed on another page for the sake of contrasting it with the correct representation of the parts in Fig. 2. Some of the words in the preceding paragraph are also italicized, since they convey incorrect or false ideas, and will be particularly remarked upon in another connection.

II. *The Physiology of the Foetal Circulation, as at present understood.*

1. The blood arriving in the inferior cava from the umbilical artery, “having been thus transmitted through the *two* great depurating organs—

* This vessel extends from the umbilical vein directly into the vena cava.

the placenta and the *fœtal liver*—is in the condition of arterial blood ; but being mixed in the vessels (the inferior cava) with that which has been returned from the trunk and lower extremities, it loses this character *in some degree*, by the time that it arrives at the heart.”—Carpenter’s Human Physiol., 4 Ed., p. 997.

2. This mixed blood is prevented, “*in great degree, if not entirely,*” from farther admixture with the venous blood in the right auricle, by the *peculiar action* of the Eustachian valve ; which carries it at once through the foramen ovale into the left auricle.—Ditto.

3. The ventricles contracting, the left propels its “*arterial*” blood into the ascending aorta, and supplies the head and upper extremities *before undergoing any admixture* ; while the right ventricle sends its *venous* blood through the (trunk of the) pulmonary artery, and the *ductus arteriosus*, into the descending aorta, there to mingle with the pure blood just mentioned, and be distributed to the trunk and lower extremities.—Ditto.

4. “Thus the head and superior extremities, whose development is required to be in advance of that of the lower, are supplied with blood *nearly as pure* as that from the placenta ;” and *vice versa* as to the rest of the body.—Ditto, and Wilson’s Human Anatomy, p. 555.

5. “In the adult the blood would be circulated through the lungs and oxydated ; but in the fœtus the lungs are solid and *almost impervious*. Only a small quantity of the blood passes, therefore, into the lungs ; the *greater part* rushing through the ductus arteriosus,” &c.—Wilson, ut sup., p. 553.

6. “The pure blood from the placenta is distributed in considerable quantity to the liver, before entering the general circulation. Hence, the abundant nutrition of that organ, and its enormous size in comparison with other viscera,” in the fœtus.—Ditto.

We find essentially the same statements in all the best authors of the present time ; and, therefore, no farther quotations or authorities are deemed necessary. We have here, also, italicized such expressions as need particular consideration, on account of their entire or partial incorrectness.

Each of the preceding six propositions will be separately reviewed, with the intention of showing their incorrectness, and at the same time of demonstrating the only true view of the subject. A few remarks will, however, be premised in this connection, expressive of the author’s doubts as to the peculiar—and really incredible—action universally assigned to the Eustachian valve.

The assumed function of the Eustachian valve not probable.

Some experiments, intended to elucidate this subject, and to which a great deal of importance seems to have been attached, were performed by

the late Dr. John Reid.* The following was regarded as the most satisfactory: Having injected both the *venæ cavæ*, of a *foetus* of seven months, at the same time—the superior cava with yellow, and the inferior with red, injection—he found that the “red had passed through the *foramen ovale*, and filled the left side of the heart without any intermixture with the yellow, except very slightly at the posterior part of the right auricle. Not a drop of the yellow appeared to have accompanied the red into the left side of the heart. From the left side it (the red) ascended the aorta and filled all the large vessels going to the head and upper extremities. The injection in all these vessels had not the slightest tinge of yellow.”

The *yellow* “filled the right auricle, free from admixture, except slightly at the posterior part of the auricle, as already mentioned. From the right auricle it filled the right ventricle, passed along the pulmonary artery, and filled the *ductus arteriosus* and branches, going to the lungs. On entering the aorta it passed down that vessel, filling it completely, without any admixture of red; and thus, all the branches of the thoracic and abdominal aorta were filled with yellow. The whole of the red had passed to the upper part of the body,” &c.

Dr. Reid's experiments have, however, entirely failed to convince us that the Eustachian valve does, or can, turn the current of blood from the inferior vena cava, across the right auricle, and through the *foramen ovale*, into the left auricle, without admixture with the venous blood from the inferior cava.

It is to be remarked, in the first place, that the complete isolation of the red and the yellow injections occurred only once in three similar experiments, and then in a *foetus* of seven months, the others being of four months, and at full term. Dr. Reid accounts for failure in the last case, since “the Eustachian valve is supposed to be less perfect at the full time than at an earlier period.” What Dr. R. supposed, is really the fact, but would it be so, *if* the valve perform the part assigned to it? On the contrary, we should suppose the necessity for the separation of the venous from the arterial blood would increase (if such necessity at any time exists) as the *foetus* becomes farther developed; and, therefore, that the valve would be most perfect just at the very end of intra-uterine life. It will, however, be shown that no such necessity actually exists at any time during *foetal* existence.

Again, we cannot suppose two currents of injection, forced through the *venæ cavæ* of a dead *foetus*, would comport themselves precisely as would the two currents of blood during life; even were the heart a passive organ. But when we consider its cavities, as exerting both a forcing and a suction power, the difference is vastly increased. In this view, the experiment

* Edinburgh Med. and Surgical Journal, Vol. 43, p. 11, &c.

appears utterly valueless, therefore. But if we are still inclined to regard the result as reliable, then it proves altogether too much—such a perfect non-admixture of the two currents during life being altogether inconceivable.

A distinguished anatomist remarks, in regard to the assumed crossing of the two blood-currents in the right auricle, without intermixture: “how this crossing is affected, the theorist will wonder; not so the practical anatomist.”* He then speaks of the direction of entrance of the two venæ cavæ, of the opening of the inferior almost directly into the left auricle; and of the use of the Eustachian valve—as enabling the anatomist at once to perceive the correctness of this theory. We confess, that, in our own case, the theory is more satisfactory without the anatomy than with it. Or, perhaps, we should rather say, that if our mere anatomy admits the belief in such a non-admixture in a dead foetus, our physiology will not for a moment, in a living one. And if there *is* an admixture, the assumed function of the Eustachian valve must be relinquished and another be assigned to it, if possible.

On merely *anatomical* grounds, the anterior termination in the auricle of the superior cava may be regarded as necessitated by the relations of its primitive branches, and, therefore, of its trunk; the former being in front of the arteries rising from the arch of the aorta, while the termination farther back in the auricle of the inferior vena cava is demanded, by the liver being in front of it. Thus, also, its termination in the right auricle, so near the foramen ovale, may be necessitated by its relations to the aorta, and to the middle line of the trunk before perforating the auricle; and, therefore, the Eustachian valve may be considered as having a more important relation to the opening of this same vein, and the passage of blood through it, than to the circulation through the foramen ovale—though it may incidentally exert some influence on the latter.

These suggestions, be it observed, are made on merely anatomical grounds. They are made to meet the inferences just objected to, and to show that the latter alone cannot form a reliable basis for the physiology of the foetal circulation. Other facts, however, will be adduced in favor of the inferences just made; and the anatomy itself will receive some important corrections as we proceed. Meantime, we will regard the assumed function of the Eustachian valve as not proved, and as improbable.

Objections to the physiological views generally entertained.

1. No importance is attached to the fact that most of the blood from the placenta circulates directly through the liver; except so far as its influence upon the development of the liver itself is concerned, and so far as the

* Wilson's Anatomy, p. 554.

liver is a depurating organ. Indeed, it is incorrectly assumed, that the major part of the blood passes through the ductus venosus into the vena cava inferior.

2. The fact that venous blood is returned from the lungs through the pulmonary veins to the left auricle, is entirely overlooked; it being assumed, also, that almost no blood enters the lungs at all,—since,

3. It is incorrectly stated that almost all the blood in the trunk of the pulmonary artery passes into the descending aorta through the ductus arteriosus.

4. No stress is put upon the dilatation or the contraction of the auricles, as having any influence in mixing the blood contained in the two auricles, through the foramen ovale.

5. It is assumed that the greater development of the head and upper extremities at birth, is owing to their having received a very pure blood during foetal life; and greatly different in this respect from that sent to the trunk and lower extremities.

The validity of these objections, and others hereafter to be suggested, will appear in a subsequent part of this paper. Some remarks, however, in regard to the relative size of the ductus venosus and the umbilical vein, and of the ductus arteriosus and pulmonary artery, are proper in this connection.

I. *Relative size of ductus venosus and umbilical vein.*

To settle this question, I carefully dissected foetuses of from six months to eight and a half months. They were not injected, from the fact that injection passes more easily through the ductus than through the liver, in the dead foetus; and, therefore, the former becomes enormously distended, while the umbilical veins, and especially those in the substance of the liver, are less so. Hence it is impossible, in this way, to get a true idea of the relative size of these vessels. I have an injected foetus at full term, in which the ductus venosus is $\frac{22}{100}$ inch (.22) in diameter, but contracting to $\frac{10}{100}$ inch (.1) just before entering the vena cava; while the umbilical vein is only $\frac{25}{100}$ inch (.25) in diameter, and the inferior cava is considerably *smaller* than the ductus. Each umbilical artery, moreover, is as large as the aorta actually is in the living foetus at full term. It is from such exaggerations that we have heretofore acquired our ideas of the relative size of these vessels.

To avoid this source of error, I carefully dissected these vessels, and completely emptying them, laid them in their collapsed state upon a plane surface, expanded to their fullest width by the required manipulations and pressure. The width thus obtained equals the semi-circumference, or $\frac{1}{2}$ of the diameter. The results are not absolutely accurate, for reasons at once apparent. But when vessels of the same structure are thus compared (as veins with

veins and arteries with arteries), the relative size is thus more nearly obtained than in any other way which has occurred to me.

In a foetus of about eight and a half months, I found the ductus venosus to have a semi-circumference of less than $\frac{1.5}{100}$ inch (.05); and the umbilical vein of $\frac{1.5}{100}$ inch (.15). In a foetus of six months, the former had a semi-circumference of $\frac{4}{100}$ inch (.04), and the latter, of $\frac{1.2}{100}$ inch (.12)—the proportion being about one to three in both cases. Each of the three hepatic veins is quite as large as the ductus venosus; and these, with the latter, carry into the vena cava inferior all the blood brought from the placenta by the umbilical vein, and from the formative branches of the vena portæ. (Fig. 2d, 7.) Admitting that one of the hepatic veins is sufficient to transmit the last mentioned blood (and the small size of the vena portæ before entering the liver warrants this supposition) we have two hepatic veins and the somewhat smaller ductus venosus, to transmit to the vena cava *all* the blood from the placenta; and can perceive no adequate reason why the ductus should transmit more than one-third of that blood. Anatomy leads to this inference; though anatomical *experiments*—injected preparations—have led to a different conclusion. We consider the former far the more reliable. In the adult, the blood passes through the pulmonary artery and its branches, and through the capillaries of the lungs, and thence through the pulmonary veins into the left auricle—just as rapidly as it passes through the aorta, and just as rapidly as it could pass through the trunk of the pulmonary artery if it terminated at once in the aorta. Probably the same obtains in the case of the foetal liver. The living blood passes rapidly through its capillaries, because nutrient changes are there going on; while an injection is first stopped by these minute vessels, then flows back through the large trunks to distend them, and finally distends to the utmost, the ductus venosus; and thus at last finds its way almost entirely through this passage into the inferior vena cava and the right auricle.

Therefore, it is believed to be within the limits of truth to say that not over one-third, at most, of the blood returned from the placenta through the umbilical vein, is carried into the inferior vena cava by the ductus venosus.

II. *Relative size of ductus arteriosus and pulmonary arteries.*

In a foetus of six months, I found the semi-circumference of the pulmonary artery, before its division, to be $\frac{1.2}{100}$ (.12) of an inch; and that of the ductus arteriosus, $\frac{4}{100}$ (.04). In a foetus of eight and a half months, the semi-circumference of the pulmonary artery was $\frac{2.5}{100}$ (.25) inch; and of the ductus arteriosus, $\frac{8}{100}$ (.08) inch. In both cases the ductus was perceptibly smaller than either of the two branches of the pulmonary artery, sent to the lungs. In the older foetus it was also somewhat smaller than either carotid artery; in the youngest I omitted to notice this comparison. In these cases,

I measured the vessels in a collapsed state, as before described. The ductus tapered towards its distal extremity, in the older foetus; and was somewhat smaller at its union with the descending aorta, than the dimensions above given.

The *anatomical* inference is, therefore, that the ductus arteriosus does not transmit any more blood into the descending aorta than each branch of the pulmonary artery carries to its lung. If it be remarked that the blood may rush more rapidly through the ductus than through the pulmonary arteries, and therefore a greater quantity be discharged, I reply that it cannot be transmitted in a current more rapid than that in the descending aorta, with which it blends; and as the latter cannot be more rapid than that in the main trunk of the pulmonary artery (since the latter and the aorta, at their commencement, transmit the same amount of blood, as nearly as may be), it follows that the current through the ductus is not more rapid than that through the pulmonary artery; and the ductus being one of its three branches, it is doubtless far less so. But, it will be remembered, that the two branches of the pulmonary artery, in the adult, transmit as much blood as the aorta, and, of course, with a rapid motion. Is there any assignable reason why the rapidity is not as great in the lungs of the foetus as in the adult? or, therefore, why they will not transmit as much blood, in proportion to their capacity, and thus carry two-thirds of that received by the pulmonary trunk, while the ductus arteriosus receives but one-third of the same? We think not. But if it should hereafter be proved that the ductus carries even one-half of the blood in the pulmonary trunk, into the descending aorta, from having a more rapid current than the two pulmonary branches, the relative size of the ductus and the pulmonary artery remains as before stated; and it will appear that the physiology of the circulation is the same, whether the proportion is greater or less within these limits.

The relative size of the *umbilical arteries* is also greatly exaggerated in injected preparations. Each of these is actually a little more than one-half the diameter of the umbilical vein; and once and one-half the diameter of the external iliac artery; still being hardly larger than the carotids. When, therefore, we consider how many branches have been previously given off, from the arch to the descending aorta, it cannot be supposed that more than one-fourth, and probably not over one-eighth, of all the blood sent by the left ventricle into the aorta, can be by them returned to the placenta. Only the same amount is, of course, returned from the latter by the umbilical vein; and the mistake of supposing all the blood of the foetus to be transmitted rapidly through the placenta, as that of the adult is through the lungs, is thus corrected; for the foetus has a *reptile* circulation.

The accompanying figures will explain the preceding statements.



Fig. I.



Fig. II.

Fig. I.—Diagram representing the anatomy and physiology of the foetal circulation—from Carpenter, and Wilson. The numbers represent the same parts as those in the next figure.

Fig. II.—Illustrating the anatomy and physiology of the foetal circulation—as demonstrated by the writer's dissections.

1—The umbilical cord, with its vein and two arteries, proceeding from 2, the placenta. 3—The umbilical vein, giving off, 4, 4, two principal branches entering 7, the vena portæ; and a third, 5, the ductus venosus (here of its natural size, as compared with 3 and 4), which enters 6, the inferior vena cava. V—The hepatic veins receiving all the blood carried into the liver by 4, and 7; and discharging it into the inferior vena cava above the ductus venosus. The three branches generally terminate separately in the vena cava. 6—The inferior vena cava. 7—Formative branches of vena portæ, from alimentary canal, &c. 8—The right auricle; the arrow indicating the course of the blood thence into 9, the left auricle. 10—The left ventricle. 11—The aorta. 12, 13—Arrows, showing the return of blood from the head and superior extremities to 14, the superior vena cava; and thence into 8, the right auricle, and 15, the right ventricle; and, in the course of the bent arrow, from the latter into 16, the pulmonary artery. 17—The ductus arteriosus (actual size) terminating in 18, 18, the descending aorta. 19—The umbilical arteries (continuations of the internal iliac, and larger than the external iliac) returning a part of the blood in the descending aorta to 2, the placenta. 20—The external iliac arteries, distributed to the lower extremities; the arrows at their extremities show the return of venous blood, by the iliac veins, to the inferior vena cava. 21—The remaining branches of the internal iliac (besides the umbilical arteries), and which are distributed, as in the adult, to the organs in the pelvis, &c.

Fig. 1st is taken from Carpenter's Physiology, and is here introduced for the sake of contrast with the correct representation. Fig. 2d shows the relative size of the ductus venosus and umbilical vein; of the ductus arteriosus and the pulmonary arteries; and of the umbilical arteries and umbilical veins, &c. It also shows the trunks of the hepatic veins, hitherto omitted; and some branches of the internal iliac, to the pelvis.

I shall now proceed to examine particularly each of the six physiological propositions which have been given as embodying the received view of the foetal circulation; in the course of which examination still other objections to this view will be suggested; and, finally, such conclusions will be deduced as the present state of physiological science demands.

Examination of the received view of the Physiology of the Foetal Circulation.

In this examination I shall separately discuss the six propositions on pages 322 and 323, and will refer the reader to those pages to avoid repetition here. The passages which are italicized will demand a particular notice.

Proposition 1st.—Doubtless the placenta is a “depurating” organ, in its influence upon the blood of the foetus: *i. e.*, the blood, while traversing its minutest vessels, parts with some of its carbonic acid gas, and receives instead, from the mother's blood circulating in the maternal portion of the placenta, an amount of oxygen gas. Thus the blood becomes aerated, and in the adult would properly be termed arterial blood. This pure blood is, however, not found unmixed in the arteries of the foetus as it is in the adult, and therefore I shall term it instead, *placental* blood, to avoid all misunderstanding. The *arterial* blood, *i. e.*, the blood *in the arteries* of the foetus, is a mixture of *placental* and *venous* blood, as will be shown.

But of the pure *placental* blood, not more than one-third, as has been seen, at once enters the inferior vena cava through the ductus venosus; the remaining two-thirds, or more, being distributed to the liver through the vena portæ. The former one-third, blending with the venous blood in the inferior vena cava (at least two or three times as much in quantity) is then carried as *mixed* blood (venous and placental, and probably considerably more than two-thirds *venous*) into the right auricle, where we leave it for the present. The remaining two-thirds of placental blood are, 1st, blended

with the venous blood brought to the liver from the formative branches of the vena portæ (fig. 2—7), which may be equal to one-third the placental blood in the vena portæ; and thus this also becomes mixed blood, and three-fourths placental. But from this mixed blood, the liver is nourished; and thus, according to all analogy, it becomes entirely venous blood, on emerging from the capillaries of the liver into the radicles of the hepatic veins. This blood must, therefore, enter the right auricle from the inferior cava as venous blood; and thus the pure placental blood, passing through the ductus venosus, has been mixed with *five times* as much* venous blood, at least, by the time it has arrived in the right auricle; and the mixture is now but one-sixth placental, and five-sixths venous blood. This, also, will be the blood to enter the left auricle, provided no further admixture previously obtains.

But it is also assumed that the foetal *liver*, as well as the placenta, is a “depurating” organ; and, therefore, the blood discharged by the hepatic veins is arterial (*i. e.*, aerated) blood, as well as that transmitted by the ductus venosus. By a *depurating* organ must here obviously be meant an organ that renders impure or venous blood arterial; or that eliminates carbonic acid gas from it, and replaces the same by oxygen. No one, however, it is believed, will distinctly assert that the liver has any such function as this.

It is well known that in the adult, the liver is an eliminator of carbon from the blood, and is therefore, in this respect, a depurating organ. It is, however, such, only so far as it secretes bile; and in doing this, it does *not* convert venous into arterial blood. We may, therefore, admit that in the foetus also, the liver separates carbon from the blood, so far as it secretes bile; while, at the same time, there is no reason to believe that it can possibly in any degree convert venous into arterial blood; or, much less, render placental blood more highly arterialized.

To what extent, therefore, the liver secretes bile in the foetus, is an important inquiry in this connection. In the adult, bile is secreted for two entirely distinct objects,—1st, to aid the process of digestion; and, 2d, to separate, at the same time, certain hydro-carbon compounds from the blood, as a depurating organ, in the sense last specified. These impurities are separated from *venous* blood; and such as, being collected by the vena portæ from the alimentary canal and its appendages below the diaphragm, contains the crude elements of the food, abounding in the hydro-carbon compounds alluded to.

* *Twice as much* in inferior vena cava; *as much* from branches (7) of vena portæ and *twice as much* from two hepatic veins.

On the other hand, in the foetus, the bile cannot be secreted in aid of digestion at all. Moreover, the blood from the alimentary canal does not here differ from venous blood in other parts of the foetus; it being nowhere laden with the hydro-carbon compounds derived, in the adult, from the food. Very little bile, then, it may be supposed, is separated as an impurity from this venous blood in the formative branches of the vena portæ, though a very small quantity may possibly be there separated. But there is no other source for bile besides, except the pure placental blood in the liver from the umbilical vein; and to suppose this secretion to be separated from arterial blood, is both to adopt an idea opposed to all analogy, and, at the same time, to assume a necessity for the production of such a secretion from elements assumed to exist in the placental blood; while there is not a shadow of reason for believing either in such a necessity, or in the existence of such elements.

But we are still pointed to the fact, that the meconium found in the alimentary canal at birth contains none of the peculiar elements of bile; and to this fact we are by no means indisposed to give its due weight. It has already been admitted that the foetal liver may secrete a small amount of bile from the venous blood derived from the formative branches of the vena portæ; and the following facts go to prove that the amount actually *is* very small. 1. The whole quantity of meconium secreted during foetal life (none being evacuated till after birth) is small; and yet more than the last half of foetal life* is required to produce the small amount found in the intestines at birth—a fact showing how slowly it is separated from the blood. But, 2d, only a comparatively small part of the meconium is actually bile. According to Dr. Davy's analysis,† 100 pints of meconium consist of—

Water,	72.7
Mucus and epithelium scales,	23.6
Cholesterine and margarine,	0.7
Coloring and sapid matter of bile and oleine,	3.0

Here we find less than 3.7 per cent. of matter peculiar to bile, while at least 8 per cent. of such matters are found in the pure secretion. The inference, therefore, is, that less than one-half of the meconium is actually bile. Simon's analysis of *dried* meconium leads to a similar conclusion; it containing only 40 per cent. of matter peculiar to bile, while dried *bile* contains 80 per cent. of such matter.

We cannot, therefore, regard the foetal liver otherwise than as a very feeble depurating organ, though it is such in the sense last explained. But I sub-

* No meconium is found in the duodenum till the fourth month is completed.

† Simon's Chemistry of Man, Vol. II.

mit that the bile is secreted, not mainly to depurate the blood of the fœtus, but to secure the discharge of the mucus and epithelium scales from the alimentary canal immediately after birth, and thus to prepare it for the reception of food. At all events, it is believed that the conversion of the placental blood into venous, in the capillaries of the liver, as before explained, would far more than compensate for all the depurating power the liver can possess as a secretor of bile; and, therefore, that the placental blood transmitted by the hepatic veins into the vena cava does *not* enter the latter vessel in a purer state than it entered the liver.

Consequently, it does not leave the fœtal liver "in the condition of arterial blood;" and to say that, after it enters the vena cava, it "loses this character in some degree by the time it arrives at the heart," has been shown to be altogether too feeble an expression to cover the facts—five-sixths of *all* the blood entering the right auricle from the vena cava inferior being venous.*

Why, then, is the liver so enormously developed in the fœtus, if not a powerful depurator of the blood, as a secretor of bile? Because it has another entirely distinct and but recently discovered function to perform. But this question will be more appropriately answered in our remarks on the sixth proposition.

Proposition 2d.—In regard to the non-admixture of the blood from the inferior vena cava (five-sixths venous), while in the right auricle, with that entering the same cavity from the superior vena cava, certain doubts have already been expressed. Of course, all belief in the complete non-admixture is based upon the supposed peculiar action of the Eustachian valve, which (it is said) carries it at once through the foramen ovale into the left auricle. It has been shown that Dr. Reid's experiments on this point are entirely inconclusive, and that, on anatomical grounds, it is as probable that this valve has a more important relation to the circulation through the inferior vena cava, than to that through the foramen ovale. But such as still insist on this non-admixture, are requested to explain how, by any *possibility*, the two auricles can contract from 140 to 150 times a minute (as in the fœtus) without securing some admixture, through the foramen ovale, of the blood

* This proposition is adopted, it will be remembered, on the calculation that the ductus venosus carries one-third of all the placental blood into the vena cava inferior. But if even *one-half* be assigned to this duct, and no allowance at all be made for the blood carried into the liver by the formative branches of the vena portæ, it would still follow that three-fourths of all the blood poured into the right auricle from the inferior cava is venous blood. No one, it is believed, can demand such an assignment, however, with a knowledge of the facts I have stated, or will doubt that five-sixths is a more accurate calculation.

distending the two auricles? And if this result does occur at all, then the object of the supposed non-admixture of the two currents in the right auricle is just so far frustrated; and it is hardly probable that a special mechanism is provided to keep the blood from mixing when it first arrives in the right auricle, and another which secures its admixture the $\frac{1}{140}$ th part of a minute afterwards. Or, if it be remarked that the *valve* of the foramen ovale prevents the mixture of the blood *through* the foramen, we will recur to the period of foetal life, when there was no septum at all between the auricles, and the subsequent period when the foramen exists, but no valve is yet formed. Must there not be a *complete* admixture of all the blood in the auricles up to this time? And must not this admixture through the foramen continue, only diminishing in proportion as the valve of the foramen becomes more complete.

In a foetus of somewhat more than six months, I find the valve occludes near three-fourths of the foramen, and in one of eight and a half months, about five-sixths of it. It will, therefore, admit still of a considerable degree of mixing of blood through it; and not until the foramen is completely closed (which, of course, never occurs till after birth), can all admixture through it be prevented. But this partial prevention of admixture is not the object of the development of the valve of the foramen, but merely incidental to its formation. Nor is the well-being of the foetus at all compromised by such admixture, though the contrary has been hitherto affirmed. The following considerations will illustrate this point.

It has already been stated, that at one period of foetal existence, the circulation is analogous to that of a fish. At this time the heart consists, as in the fish, of a single auricle, a single ventricle, and a bulbus arteriosus. Subsequently, the ventricle is divided into two cavities, by the formation of a septum, completed at the ninth week; and now the foetal heart is, in respect to its function, precisely that of the reptile, and consists of two ventricles and a single auricle.* This is, in fact, the type of the foetal circulation till birth. The septum between the two auricles, first appearing at about three months, is for some time very imperfect, from the opening called the foramen ovale remaining very large; then the valve of the foramen ovale gradually diminishes the opening, as it increases in size, and in the same proportion interferes with the mixture of the blood in the two auricles during their contraction. But we must regard the formation of the valve merely as a gradual approximation to the type of circulation to come at once after birth, and to the construction of the true *mammal* heart—of two auricles and two ventricles—which is required by that new mode of

* The precise difference between the foetal and the reptile heart in *structure*, will appear on a subsequent page.

existence. We can only say, the valve, by its gradual development before birth, has, by that time, produced a *mammal* heart, as *nearly as is consistent with a reptile circulation*; and which may at once act as a mammal heart when birth takes place. The foramen ovale is perfectly closed in about eight days after birth; and then the true mammal heart becomes perfect, in structure as well as in function.

But though the valve of the foramen ovale *may*, incidentally, to some extent prevent admixture of the blood in the two auricles, while they are contracting during the last few weeks of foetal life; still, this result is of no importance whatever, since it will now be shown that the blood in the left auricle is, on its first arrival in that cavity, probably quite as impure as that in the right auricle.

This proposition implies that the Eustachian valve does *not* prevent an intermixture in the right auricle of the blood from the inferior vena cava with that from the superior cava, by directing the former current at once from the vein through the foramen ovale—as is assumed. Objections to Dr. Reid's experiments have already been made, and others will now be added.

1st. If the Eustachian valve is formed to turn the current from the inferior vena cava at once through the foramen ovale, it must be admitted that its position is very unfavorable for the accomplishment of that object. The best position would evidently be secured, if it projected from the outer wall of the vein, and thus presented its free border towards the foramen ovale, in a line extending antero-posteriorly. According to my observations, it actually projects from the anterior wall of the vein, though obliquely, so as to terminate at the antero-inferior border of the foramen ovale. Sometimes, however, it is attached even to the middle of the posterior (or left) border of the foramen ovale; a position far more unfavorable than the one just mentioned. A glance at the following figure will illustrate this point.

2d. It has been remarked, that if the Eustachian valve does keep the purer blood from the inferior vena cava from mixing with the less pure blood from the superior cava, we should expect it would remain perfect till birth; while in fact it becomes atrophied from the seventh month, and continues to diminish, while the valve of the foramen ovale increases in size.

3d. The increase of the latter valve, while the Eustachian is diminishing, might seem to imply that the former comes, in some degree, to supply the place of the latter. But it is impossible that the former can, in any degree, direct the blood from the inferior vena cava *through the foramen ovale*.

Fig. III.—Modified from Weber. The Eustachian valve at six months. A—Inferior vena cava. B—Superior vena cava. C—Eustachian valve in front of termination of A; its inner extremity attached even to the middle of the posterior border of the foramen ovale, D. The upper end of the probe passing through the inferior vena cava, rests on the posterior wall of the right auricle; and just below it is the opening of the coronary vein, partly closed by its valve.



It is inferred, therefore, that the Eustachian valve is not formed to "prevent in great degree, if not entirely," the admixture of the blood from the inferior with that from the superior cava. That it may have some effect of this kind while the valve is largest, is possible; but this possible effect is incidental to another function, and in itself, if actual, is of no physiological importance whatever.

What, then, is the true function of the Eustachian valve? After much reflection, and study of its form and relations, the ideas of Winslow,* published nearly one hundred and fifty years ago, seem the most philosophical, viz., that it opposes the regurgitation of the blood from the right auricle into the inferior vena cava; while it also, as Lancisi maintained, prevents the current from the superior cava from falling too forcibly upon that of the cava inferior. The effects of such a regurgitation in preventing the arrival of the placental blood in the heart, need not be specified; and it is equally apparent that if this be the true function of this valve, it is replaced, so far as regurgitation, from the left auricle, and then into the inferior cava is concerned, by the valve of the foramen; and, therefore, in proportion as the latter is developed, the former may become atrophied, as already explained. It may, also, be added, that the position of the Eustachian valve, though unfavorable for directing the blood through the foramen ovale, is the only possible one in which it could both prevent regurgitation and break the impetus of the current from the superior vena cava, and, at the same time, *not much* OBSTRUCT the passage of the blood through the foramen ovale. These three results are, however, unimportant after birth, and when no placental or arterial blood is to enter the right auricle; and hence the valve is atrophied and useless after that event.

* *Memoires de l'Academie Royale*, 1717.

3d Proposition.—Before entering upon this, we may recapitulate the two principal points just established, viz.:

1. That of the blood arriving in the right auricle from the inferior vena cava, about one-sixth is pure placental blood, and five-sixths are venous; and,

2. That the Eustachian valve has little, if any, power (and none, certainly, in the last part of foetal life) to prevent the admixture of the blood arriving in the right auricle from the two venæ cavæ.

Now, admitting that the superior vena cava discharges but one-half as much blood as the inferior—and which is certainly a sufficiently *low* estimate—it will add three parts more of venous blood to the three of venous and one of placental blood from the inferior vena cava; and thus, of all the blood filling the right auricle, one-ninth will be placental and eight-ninths venous.* It has also been shown that the same mixed blood must enter the foramen ovale and fill the left auricle, except so far as the Eustachian valve may possibly, incidentally, and in less degree as the full term approaches, direct a somewhat larger proportion of the blood from the inferior cava through that opening, than of that from the superior cava. If, however, any difference as to the purity of the blood in the two auricles be produced in this way, it must be before the Eustachian valve is much atrophied; and, therefore, at the time when, the valve of the foramen ovale being still slightly developed, the blood in the two auricles will be mingled through the foramen ovale at each contraction. We, therefore, conceive no essential difference as to the purity of the blood in the two auricles can exist. If, however, it be still asserted that the blood would not be mixed to any considerable extent through the foramen during the last four to six weeks before birth, let it be remembered, both that the Eustachian valve cannot then perform its assumed function, and also that the blood in the left auricle is constantly rendered less pure by the venous blood entering it directly from the lungs, through the pulmonary veins. The amount of venous blood thus returned is far greater than has been hitherto admitted, being about two-thirds of all sent through the pulmonary arteries. The improbability is therefore extreme, that the blood in the left auricle is essentially, or indeed in any degree, purer than that of the right auricle. It may also be remarked that the dilatation or *diastole* of the auricles, exerting a suction power on the blood entering these cavities from the veins, would also commingle the blood as it enters the right auricle, and then passes through the foramen ovale to the left; and even before the auricular contraction takes place.

* If three-fourths instead of five-sixths be insisted on (note, p. 333), then the blood filling the right auricle would be one-sixth placental and five-sixths venous. In either case, its *highly venous* character is established.

We, therefore, perceive that when the ventricles contract, after receiving the blood from the auricles, the *left* ventricle does *not* send "arterial" blood, *before undergoing any admixture*, into the ascending aorta, &c.; but it sends a *mixed* blood, probably eight-ninths venous (and certainly more than five-sixths venous) into that vessel. Neither does the *right* ventricle send more *venous* blood into the pulmonary artery and onwards; the latter blood being as pure as the former, or five-sixths to eight-ninths venous.

The same is true of the reptile, though the heart of the latter consists of two auricles and but a single ventricle. One auricle receives the venous blood from the whole body, like the right auricle of the human adult; the other receives the aerated blood from the lungs. Both contracting simultaneously, these two kinds of blood are forced into the single ventricle, and there mixed; and the latter sends this *mixed* blood through the aorta to the body generally, and also through another much smaller vessel—the pulmonary artery—to the lungs, for further aeration; equally pure blood being sent through both these vessels.

The foetus has a *single auricle* (*actually* at the third month and later, and *practically* until birth), and two ventricles. Yet, precisely as in the reptile, the same *mixed* blood is poured into the aorta and the pulmonary artery; it being mixed, in the reptile, in the single ventricle, and, in the foetus, in the (practically) single auricle, before it enters the double ventricle. Why, then, is not the auricle of the foetus double and the ventricle single, as in the reptile? A little reflection will show that the arrangement actually existing in the foetus, is the only simple one which is compatible with the requirements of the case, viz., a *temporary reptile circulation to be instantly changed to a permanent mammal circulation*.

What has so long been taught, therefore, in regard to the ductus arteriosus carrying *venous* blood into the descending aorta for a particular reason, must at length fall to the ground.

4th Proposition. It does *not*, therefore, follow that the "head and superior extremities are supplied with blood *nearly as pure as that from the placenta*;" though it is true that these parts are developed in advance of the trunk and lower extremities. Nor is it the fact that the last mentioned parts are supplied with a less pure blood than the others. It has been shown that the pulmonary artery receives *as pure* blood as the aorta. This is necessitated, also, from the physiological fact that the pulmonary artery is the *nutrient* artery of the lungs;* as the history of the development of

* Dr. Heale has recently demonstrated the same proposition; and shown that the bronchial arteries only give the vasa vasorum to the pulmonary, and supply the pleura, also, in part. See April ('54) No. of the MONTHLY, p. 302.

these organs clearly indicates; though it would carry me too far from my present purpose to explain this point at length. It has also been shown that the blood entering the aorta from the left ventricle is as impure as that contained in the right side of the heart. If still farther proof is required, it may be remembered that in cases of cyanosis, or patency of the foramen ovale after birth, the livid color of the face, and all other parts of the surface, affords a visual demonstration of the assertion that the aorta circulates highly *venous* blood. And can we suppose the blood in the aorta is purer before birth than afterwards?

It has been assumed that the earlier development of the head and superior extremities, is at the same time an effect of their being nourished by a purer blood, and also a proof of such superior purity—a good illustration of what logicians term “reasoning in a circle.” It has been shown that no such difference in the purity of the blood can exist. But this question will also be briefly considered, on independent grounds, since so much importance has been attached to this assumption.

It is true that the organs of sensation, deglutition, and prehension, are early needed and early developed; and this implies an early development of the brain and spinal cord—and, in a word, of the head and superior extremities. These parts are also supplied with blood from the arch of the aorta. But, it is equally true, that the alimentary canal, and the urinary apparatus, are quite as far developed at birth; though the latter organs are all supplied by the descending aorta. A difference in the purity of the nutrient blood cannot, therefore, account for the more early development. Or, if it still be insisted that we may thus account for the facts, how then shall blood of *equal* purity, sent to the upper and lower extremities *after* birth, enable the latter to gain upon and overtake the advanced development of the former?

And, again, if a purer nutrient blood produces a more rapid development of the head and superior extremities of the human foetus, the same should obtain in all the mammalia—the foetal circulation being in all essentially the same; and we may inquire, why the posterior extremities of the calf, the sheep, and the dog, are, at birth, equally developed with the anterior extremities and the head?

Thus comparative physiology again leads us to the conclusion that there is no difference as to the purity of the blood contained in the ascending and the descending aorta, as it previously has indicated that the blood in the pulmonary artery and the ascending aorta are, in respect to purity, the same.

How, then, shall we account for the earlier development of the head and superior extremities? We can only say it is an ultimate fact—a *law of development*. And yet, it is certainly no more difficult to explain how they are *first* developed while they receive the *same* blood as the lower extremi-

ties, than it would be to explain why the alimentary canal and kidneys are *equally* developed with them, on the other supposition—that the latter are nourished by an *inferior* blood.

The great law of development appears to be, that “the parts and organs first needed are first developed;” and is applicable also to different parts of the same apparatus, and even to different portions of the same organ, e. g., the ribs are developed earlier than the sternum—the bones at the base of the cranium earlier than those of the vertex—the laminae of the vertebræ before the bodies, and those of the dorsal region first of all—and the organ of sight previously to that of smell. But, as the parts and organs needed, immediately after birth, vary in different animals, we find a corresponding difference in development up to that period. The young of the marsupialia, remaining, for some time after birth, in a pouch, and attached to the mamma of the mother, is an embryo, rather than a foetus, when born, so far as development is concerned. The herbivora and carnivora, needing immediately to be able to stand and walk, have all the four extremities equally developed at birth. The human infant is very differently circumstanced in this latter respect; and to distend the uterus during gestation with a pair of well-developed inferior extremities, which are not to become available for several months after birth, would certainly be productive of some inconvenience, without any compensating advantage; especially since, as things now are even, the motor powers of these less-developed limbs are not seldom by mothers found to be inconveniently energetic.

Thus, the idea of a purer blood being sent to the head and upper extremities, is shown to be untenable, from whatever point of view we consider it. And, as it was suggested at first, from a mere desire to account, and for the special purpose of accounting, for the earlier development of the upper parts of the foetus—and other facts have been perverted to support it—it is, at last, high time to remand it back to the brain, now long since mouldering in dust, which first conceived it.

5th Proposition.—We have next to show the incorrectness of the assertion, that “in the foetus the lungs are solid and *almost impervious* ;” and that the “*greater part*” of the blood in the pulmonary artery “rushes through the ductus arteriosus” into the descending aorta.

It is true that the foetal lungs are more solid than they are after birth, but no more so than the liver or the kidneys; and therefore we discover no reason why they are more impervious to the circulation than these organs—which transmit an abundance of blood. Moreover, we have discovered a reason for admitting a free circulation through the foetal lungs, in the comparatively large size of the pulmonary arteries and veins; and a *necessity* for such a circulation, since the pulmonary arteries are the *nutrient* arteries

of the lungs. It has been seen that, if we may judge from the size of the two branches of the pulmonary artery, compared with that of the ductus arteriosus, about two-thirds of all the blood sent from the right ventricle traverses the lungs; and is, of course, returned as *venous* blood to the left auricle, by the pulmonary veins. In the fœtus, a *mixed* blood is sent through the lungs for their nutrition, for entirely venous blood will not accomplish that object; in the adult, *venous* blood is sent through the lungs first for "oxydation," or aeration; and secondly, for the nutrition of the lungs after aeration is secured.*

Thus, also, the "greater part" of the blood in the trunk of the pulmonary artery does not rush through the ductus arteriosus—only about one-third of that blood is transmitted through this duct. It has also been shown that the blood it transmits is as pure as that sent from the left auricle directly into the ascending aorta. The ductus does not, therefore, terminate in the descending aorta, in order to avoid mixing its impure blood with that sent to the head and upper extremities, but for some other reason; and we deem it unnecessary to look for it beyond the fact that the commencement of the descending aorta is the *nearest* point in that vessel which the ductus can enter. What, then, is the true function of the ductus arteriosus? It is, we conceive, merely a "waste pipe," to conduct at once into the aorta all that part of the blood in the trunk of the pulmonary artery which the collapsed fœtal lungs cannot receive. Hence, as soon as the lungs are distended by the first inspiration, and thus made capable of receiving and transmitting *all* the blood sent from the right auricle and ventricle into the trunk of the pulmonary artery, the ductus becomes at once useless, and, together with the foramen ovale and the ductus venosus, becomes completely closed about eight days after birth.†

But while the fact is insisted on, that the pulmonary artery and the aorta carry equally pure blood, it must be remembered that in both these vessels there is not more than one part of pure placental blood to six or eight of venous blood. Thus the blood in the arteries of the fœtus is but slightly more pure than the venous blood of the adult. It seems to have been taken for granted that the organs of the fœtus (the head and upper extremities, at least) must be developed from pure arterial blood—blood as pure as the arterial blood of the adult. It is now apparent that no such blood exists in any artery possessed by the fœtus; but only in the umbilical

* For an explanation of this, see the MONTHLY, April No., 1854, p. 303.

† Billard found that of nineteen infants who had lived but one day, the foramen ovale was completely open in fourteen; in two, it had begun to close; and in two it was completely shut. Of twenty who had died on the eighth day, five only still had the foramen open.—*Traité des Maladies des Enfants nouveau-nés*, 1828.

vein, and the ductus venosus. All the organs of the reptile are also developed from a mixed blood.

But while blood of equal purity is sent through the pulmonary artery and the aorta in the human foetus, the blood returned to the placenta for farther purification is just *as pure* also. The umbilical arteries are merely continuations of the internal iliac arteries, and, of course, contain the same blood as the aorta. But here, again, the analogy to the reptile is perfect; the *mixed* blood in the single ventricle being sent, in part, through the pulmonary artery and lungs for farther aeration, while the rest is sent through the aorta and its branches, for the nutrition of the body generally. In the reptile, moreover, the pulmonary artery is smaller than the aorta, and less blood passes through the lungs than through the aorta and to the tissues generally. In the foetus, also, much more blood passes through the aorta than to the *placenta*—it having been shown that the umbilical arteries cannot transmit more than one-sixth of all the blood received by the aorta at its commencement. In the human adult, as much blood is sent through the lungs as through the aorta and its divisions; and it is calculated that the whole mass in the body may pass through them, and therefore become aerated in the space of three minutes; the standard of aeration in the adult is therefore high. In the foetus, on the other hand, the umbilical arteries can return the blood to the placenta only about one-sixth as rapidly in proportion as it is circulated through the lungs in the adult; and, therefore, the standard of aeration in the foetus, as in the reptile, is low. And the *mixed* blood in the umbilical arteries being returned as pure *placental* blood by the umbilical vein, this low standard of aeration of the mass of blood in the arterial system of the foetus is thus constantly maintained, though the quantity of *pure* blood returned to the heart through the ductus venosus is so small.

There are other peculiarities of arterial foetal blood, besides its *venous* character and appearance, as (compared with the mother's blood) its abundance of colored corpuscles, and its deficiency of fibrine. But, upon these peculiarities I need not dwell; nor is farther proof required, it is believed, of the incorrectness of the proposition now under consideration. And should it, at any time, be proved that even one-half of the blood in the trunk of the pulmonary artery traverses the ductus arteriosus, its physiological inaccuracy would remain unchanged.

6th Proposition.—There can be no doubt that the large size of the foetal liver is the direct result of the distribution to it of a large amount of the pure placental blood. Indeed, it has been shown that while all other organs in the foetus are nourished from a mixed blood (not more than one-sixth placental) this organ alone is nourished by a mixture of three-fourths placental blood. A comparatively early and enormous development might reasonably be expected, therefore; and it is found actually to obtain.

But we cannot regard this enormous development as merely a casual result of the distribution of a great amount of pure blood to the fœtal liver, as the quotation constituting the proposition now under consideration seems to imply. We believe the law of development, before mentioned, is as applicable here as elsewhere; and that the blood is sent to the liver on purpose to develop it—it being largely and early developed, because early needed, in the fœtal economy.

What, then, is the function of the fœtal liver requiring so early and so enormous a development? The liver of the reptile is also largely developed, and here we discover another analogy with the human fœtus. We have also seen, that it cannot be as a secreter of bile that the liver is so early needed. Bile is not found in the intestine at all till the fifth month; and it has been shown that only a small quantity, in the aggregate, can have been secreted previously to birth. On the other hand, the liver is one of the first organs becoming distinct in the embryo, constituting, at from three to five weeks, over one half the weight of the entire embryo; almost entirely filling the abdomen at twelve weeks; and constituting $\frac{1}{18}$ part of the weight of the whole body at birth. The inference is, therefore, that the liver performs some function before it becomes a secreter of bile, to a perceptible extent—that this is a more important function than the one later manifested—and that it continues in full activity till birth, when it diminishes.

Those who are familiar with the recent experiments of Bernard, of Paris, will not hesitate to decide, that the function of the liver, as a *blood-making* organ, is the one in question. For, it must not be forgotten, that the fœtus makes its own blood; not deriving a particle of *blood* from the mother's vessels—but merely the *elements* from which it forms its own vital fluid. That the liver is the organ most important in the blood-making process, has been demonstrated by Bernard; and, surely, there is no time when its action is so much required as when the first blood is to be formed, and increased, and all the tissues are to be developed—from elements obtained from the blood of the mother. Hence the large development of this organ in the fœtus.

But the liver actually diminishes in size at once after birth—the diminution affecting principally the left lobe; and which, in the fœtus, is about as large as the right. Indeed, it is not till the infant is from ten to twelve months old, that the liver has again become as large as it was at birth. Doubtless the withdrawal of the pure placental blood from this organ at birth, and the substitution of mere venous blood in the vena portæ, is the immediate cause of this atrophied condition of the organ for a time. Still we cannot regard this condition as merely accidentally owing to that cause. The blood of the new-born infant is to be formed from elements contained in food, and not derived, as before, directly from the mother's blood-current. True, the milk naturally destined for its nourishment, is also obtained from

the mother's blood. But the gland secreting it has elaborated its elements from the blood; and, it being digested before entering the liver, less of the peculiar action of the latter organ is probably required in the blood-making process. When, however, the child begins to take a variety of aliment—or when somewhat more than a year old—the liver is found to have regained its weight at birth, and now gradually proceeds to its full development in the adult, when it constitutes about $\frac{1}{3\frac{1}{2}}$ part of the entire weight of the body. These remarks are, however, made, not so much to explain the atrophy of the liver after birth, but as naturally suggested by and associated with its occurrence.

The vena portæ in the foetal liver is, therefore, in all respects, an *artery*; it carries the pure blood from the placenta, and is the *nutrient* artery of the liver, as the pulmonary is of the lungs. It is, however, also, something more. The formative branches constitute the true vena portæ in the foetus, as well as in the adult; and, therefore, its branches in the substance of the liver, containing the venous blood from these—mixed with the placental blood, as before explained—represent the vena portæ in the liver of the adult, containing only venous blood, from which the bile is secreted—at the same time that it is also the nutrient artery of this organ. After birth, the hepatic artery, which, in the foetus, does hardly more than afford the vasa vasorum to the vena portæ, becomes the sole nutrient artery of this organ, as it alone transmits arterial blood. For the assumption appears well founded, that after birth the tissues can be developed and repaired from arterial, or completely aerated, blood alone; while the tissues of the foetus are formed, as has been proved, from a mixed blood, of which (except, in case of the liver alone) the venous forms from five to eight times as large a proportion as the placental or aerated blood.

Having completed my examination of the propositions under consideration, I now conclude with a recapitulation of the conclusions which have been arrived at, and which together constitute, it is believed, such a view of the foetal circulation, during the last half of foetal life, as the present state of physiological science demands.

The view of the foetal circulation required by the present state of physiological science.

1st. The human foetus, during the last half of foetal existence, has a *reptile* circulation—the mammal circulation commencing at birth; and the structure and the function of each particular part of its circulatory apparatus are in subservience to this fundamental fact. The characteristics of a reptile circulation are—1, the circulation of a *mixed* blood (and of the same degree of impurity) through both the aorta to the tissues, and through the

pulmonary artery to the lungs ; and 2, the transmission of far less blood to the aerating apparatus than is sent through the aorta.

2. The foramen ovale with its valve is the only simple mechanism which could answer the requirements of the case, viz., a temporary reptile circulation with a capability of instantaneous change to a permanent mammal circulation, the foramen becoming permanently closed about eight days after birth.

3. The ductus arteriosus is merely a "waste pipe," conducting into the nearest portion of the aorta that part of the blood sent into the trunk of the pulmonary artery, which the collapsed lungs of the fœtus are unable to receive. After birth the latter admit all the blood, and the ductus is, therefore, useless. It does not enter the descending aorta to avoid sending its blood to the head and upper extremities.

4. Though the lungs are more solid in the fœtus than after birth, they are probably permeated by about two-thirds of the blood entering the trunk of the pulmonary artery, and this is returned as *venous* blood to the left auricle.

5. The blood arriving in the right auricle from the two *venæ cavæ* is completely intermixed by the diastole and systole of this cavity ; and the same mixed blood is therefore transmitted through the foramen ovale into the left auricle. Or, if by any possibility more placental blood enters that cavity, the venous blood returned by the pulmonary veins most probably counterbalances that advantage.

6. The Eustachian valve cannot prevent the admixture of the blood from the *venæ cavæ*, nor direct that from the inferior cava at once through the foramen ovale ; it merely prevents regurgitation from the auricle into the inferior vena cava, at the same time incidentally preventing the current from the superior cava from impinging so forcibly upon that of the inferior. Hence the valve of the foramen ovale replaces it to some extent, in respect to its principal function ; and, therefore, it becomes atrophied in proportion as the latter is developed.

7. No artery in the body of the fœtus contains *arterial* blood. The aorta and pulmonary artery, and all their branches, contain a *mixed* blood, about five parts, at least, venous to one part placental. The precise proportions, however, are unimportant, the blood being of a *highly venous* character, and as impure in the aorta as in the pulmonary artery. Only the umbilical vein and the ductus venosus contain pure aerated placental blood.

8. The umbilical arteries contain the same mixed blood as the aorta, and possibly return one-sixth of the blood received by that vessel ; but this amount, aerated in the placenta and returned by the umbilical veins, suffices to maintain the low standard of aeration in the fœtus.

9. The head and upper extremities of the fœtus do not receive a purer

blood than the lower parts of the body. They, as well as the digestive and urinary apparatus, are earlier developed, in accordance with a general law of development.

10. The foetal liver is a *depurating* organ only so far as it secretes bile, and therefore, to a slight extent, though it does not thus convert venous into arterial blood. Its large development, from the placental blood abundantly distributed to it, has relation to its function as a *blood-making* and not as a *bile-secreting* organ; and this blood becomes *venous* in the capillaries and the hepatic veins, as all analogy proves.

11. The trunk of the vena portæ is, in the foetus, both the *nutrient artery* of the liver, and also corresponds to the vena portæ of the adult—its formative branches containing venous blood from which the bile in the meconium is probably secreted:

12. Anatomy, the history of development, and comparative physiology, combine to sustain the preceding propositions.

Bowdoin College, April 1, 1854.

Uterine Sympathy. By EDWARD WARREN, M. D., Edinton, N. C.

MANY writers have denied, that an impression made on the mind of a pregnant woman can produce any effect on the foetus, beyond that which may be ascribed to the operation of some physical and palpable cause. However specious and plausible their arguments may be, their inferences are opposed by an array of facts too substantial and imposing either to be set aside or passed over by those who will consider the subject thoroughly and fairly. It is possible that many ridiculous stories have been told in regard to the marks, alterations, &c., impressed on the child in utero, but these do not change the well-established fact that, in some instances, such modifications have been produced, and are being effected daily throughout the world. It is denied that the connection subsisting between the foetus and the woman is sufficiently intimate to render such a condition of things possible. Now, there might be something plausible in this objection, if it were not contradicted and nullified by the experience of all who have seen children resembling their parents both in feature, form, gait, and disposition. Surely, if "the connection" is strong enough to establish and perpetuate such a resemblance as this, it is sufficiently close and positive for the production of the other result.

The mistake which has been made by Buffon, Gerard, Parr, and others, on this subject, arises from an attempt to determine the theoretical ques-

tion, Can this thing be? instead of the practical one, Is it so? It is evident that the first question cannot be answered satisfactorily until the relations between mind and matter are fully understood and accurately defined. As the whole matter is involved in a mystery too profound for the penetration of a finite mind, of course, the connection between the intangible cause and the material result cannot be logically demonstrated. It has been for this reason that great minds have fallen into so glaring an error in regard to the influence exerted by the mind of the mother on the child in her womb. They have been unable to reason the thing out, and on that account have rejected it as impossible. The practical question, Is this thing so? can be more readily and most satisfactorily determined. Even if it is impossible to demonstrate that such a result must necessarily be produced, or to show why and how such things do occur, we cannot deny the fact of their existence, without impeaching the testimony of some of the most eminent and respectable men that have adorned and advanced the profession of medicine. Beside the mass of evidence furnished by medical men, Holy Writ itself gives an instance of this singular phenomenon. In Genesis, it is said that "Jacob took him rods of green poplar, and of the hazel and chestnut tree, and pilled white streaks in them, and made the white appear which was in the rods. And he set the rods which he had pilled before the flocks in the gutters in the watering-troughs, when the flocks came to drink, that they should conceive when they came to drink. And the flocks conceived before the rods, and brought forth cattle, ringed, streaked, speckled, and spotted." Thus the highest authority among men arrays itself against those who refuse to recognize the doctrine of uterine sympathy and maternal influence.

A number of instances in point might be mentioned in this connection, but a few will suffice for my present purpose. Millingen gives the case of a lady who, during pregnancy, was struck with the unpleasant view of leeches applied to a relation's foot. Her child was born with a leech coiled up in the act of suction on the identical spot. The same author, on the authority of Bennett, relates the following instance of this sympathetic agency of mind on matter. A woman gave birth to a child with a large cluster of globular tumors growing from the tongue, and preventing the closure of the mouth, resembling, in every particular, common grapes; and with a red excrescence from the chest, like the wattles of a turkey. On being questioned, *before* the child was shown her, she answered that whilst pregnant she had seen some grapes, which she longed most ardently for; and that she had been attacked and alarmed by a turkey cock. *Nævi materni* frequently resemble fruits; and it is a well-authenticated fact, that there exists a remarkable sympathy between them and what they represent. Some will actually assume a tinge of maturity when the fruit is ripening,

and become gradually more pale as it is going out of season. The same thing has also been said in regard to animal marks, which are not uncommon. For instance, they will present a deeper color when the animal by which they have been produced is mentioned or seen. From these facts, it appears that a mental impression is not only capable of directly reproducing itself, but also of developing a mysterious sympathy, the influence of which is felt and perpetuated so long as the organism concerned in its operations remains in existence.

The particular object of this paper is to add a few more instances to those already reported, for the purpose of contributing something towards the settlement of a question which has been so long mooted in the medical world.

There is a negro boy in this town, aged about ten years, in good health, and quite well grown, whose countenance bears a remarkable resemblance to that of a fox. The likeness is so great, that it strikes every observer at first sight, and attracts the immediate attention of all who see him. But this is not all: he walks and runs habitually on his hands and feet, like a quadruped, and is more active than most boys of his age who use their limbs in the ordinary way. He is solitary in his habits, shy in his manners, and of a cunning and roguish disposition. In almost every particular, some resemblance to a fox manifests itself; and when all the points of similitude are considered together, the likeness is most remarkable.

As soon as my attention was directed to him, I became interested in the case, and instituted inquiries in regard to the experience of his mother during her pregnancy.

From her, and other reliable sources, I learned that when in that delicate condition, her master secured a living fox, which he chained in a situation where she was compelled to see it daily during the continuance of her pregnancy.

The resemblance to the fox was plainly distinguishable when the child was born, and has continued to increase until the boy presents the appearance and peculiarities mentioned above.

Another case of a like nature came under my observation recently. A pregnant woman residing near this town saw a picture of a rabbit, with which she was exceedingly delighted. When her child was born, it was hare-lipped, and bore so striking resemblance to a rabbit, that the most casual observer could not fail to discover it at a glance. The infant attracted much attention because of this strange circumstance, and was visited and examined by many persons in the neighborhood. Among those who saw it frequently was another pregnant woman; and when she gave birth to her child, it was marked in the same way, and bore a similar resemblance.

The first child died early, the other is still alive and in good health.

I am acquainted with a young man, the first finger of whose right hand presents a very singular appearance. The end of it is devoid of every thing like a nail, save in three points, which correspond in size and position to the eyes and mouth of a snake, and presents almost an exact resemblance to the head of a serpent.

He says the account which he received from his parents and their contemporaries is, that when his mother was pregnant, a snake crawled into the house, to which she pointed in great alarm with the first finger of her right hand, and then fainted away.

I have no way of establishing this matter positively ; but the young man was assured of the truth of the explanation, and I have every reason to consider it correct.

I have seen some cases in which the maculæ resembled fruit, and know of others in which fish were distinctly represented. In all of these, the effect of an impression made on the mind of the mother by some external cause, could be traced and established. Thus, a woman was fond of pears, and longed intensely for them during her pregnancy ; when her child was born, a small pear was pendant from its ear, and the last finger of the right hand. Another desired to indulge in eating crabs, but for some reason was unable to gratify herself in that respect. Her child had the figure of a crab distinctly marked upon it, and bears the *nævus* to this day.

In view of these facts, it is apparent that the duties of a mother begin even before the birth of her offspring. Since mental impressions are so easily transmitted and reproduced, it is as important that she should cultivate kindly feelings and elevated sentiments, during the existence of her pregnancy, as to adorn herself with the noblest and loveliest virtues for the imitation and improvement of her living child. She should avoid all causes of excitement, shun every source of disquietude, and labor to preserve a calm, composed, and peaceful state of mind. In a word, she should endeavor to develop in herself that temper, disposition, and intellect, which she would most desire for the being she is about to call into existence, and around whom the holiest ties, the fondest hopes, and the purest love of her heart must concentrate forever. I do not mean that she can absolutely endow her child as her affections would dictate or her judgment suggest ; but it is impossible to consider the intimate union existing between the mother and the being within her bosom, and the mysterious influences which manifest themselves in that connection, without concluding that something may be done towards moulding the mind and character of the babe in utero, which will affect its subsequent destiny. History hardly presents a great name, whose talents were not directly derived from his mother, and whose character was not developed under the fostering care of

maternal influence. Nor is this all: there is scarcely a man mentioned either in modern or classic story, with whom dark and terrible deeds are associated, who did not learn his first lessons of iniquity from the frail daughter of humanity to whom he was indebted for his being. These facts are ominous, and should speak volumes of eloquent truth to the world.

I have thus endeavored to give a few facts which bear on the subject of uterine sympathy. I suppose every physician in practice has met with many similar and perhaps more interesting examples. If all would make public their experience, great benefits might result to the profession; for light would be thrown on one of the darkest problems of medical philosophy, and a question determined, immensely important in itself, and which must prove a source of difficulty and dispute until all the facts connected with it have been observed and analyzed.

Rupture of the Perineum, its causes, prevention, and cure. By AUGUSTUS K. GARDNER, A. M., M. D., Member of the National Medical Association, &c.

(Read before the N. Y. Academy of Medicine, and published by permission.)

Among all the causes of dystochia, rigidity of the perineum is perhaps the least common and the least troublesome. Notwithstanding the teachings of many of our works on midwifery, from not a small experience I am inclined to think that too great stress is placed upon this occasional cause of difficult and protracted labor. Not unfrequent are the cases, where the presenting portion remains down upon the perineum for a considerable period; but I am not prepared to admit that this arrest is always, or even generally, caused by an unusual rigidity of the soft parts. Not unfrequently it is noted that the dilatability of the perineum is such as to afford no resistance to the advance of the labor—the delay being due to an absence or cessation of the *vis a tergo*, the contraction of the womb; the bulk of the presenting part crowding through a narrow outlet; some unnatural growth or deformity of the pelvis, the coccyx, or the vagina; rigidity of the sacro-schiatic and coccygeal ligaments; from an unusually short *cord*, either naturally so, or from being wound about the child and arresting its descent; or, finally, from a delay in the rotation of the presenting part, which should bring the long diameter in correspondence with that of the inferior strait; that the pressure be not made upon the inner surface of the *tuber ischii*; or from an arrest in the rotation of the shoulders (where the head presents) corresponding to the diameter of the superior or middle strait in which it is placed.

I have not mentioned cases of unusual presentation—as of the face—where the delay at the inferior strait is evidently to be ascribed to the unusually long diameter of the presenting part, in reference to the diameter of the outlet. I mention these as some of the causes which delay the labor when the head is down upon the perineum, and when this delay may not be properly ascribed to the rigidity of the perineum.

This rigidity, when it does actually exist, may be referred to the strength of the muscles of that locality, being commonly found in females whose laborious life has given unusual development to them; sometimes it is due to the adhesions of the muscular fibre, from age, or from cicatrices of wounds, and occasionally to œdema of the surrounding parts.

In the progress of labor, this state of things, which impedes the delivery of the child, is overcome in two ways; first, by the gradual and complete dilatation of the perineum; secondly, by the tearing asunder the integuments to allow the passage. When the rent is slight, this is called a laceration of the perineum; it is in reality but a laceration of the vulva; but, when more extensive, it is denominated a rupture, more or less complete, of the perineum.

Instances have occurred of results, other than the above, happening in consequence of their abnormal condition. Instead of dilating or rupturing, the perineum is sometimes perforated, and the foetal head passing through the aperture thus formed. Sometimes, with tremendous disruption, the head of the child may be forced through the intestine, and pass through the sphincter ani.* Dr. Cheeseman, of this city, has related to me a case to which he was recently called in consultation—a primipara—where the perineum was uninjured and also the rectum untouched, but where, by almost a single pain, the vulva was rent, and the entire cellular tissue of the perineum, down to the intestine and through the sphincter ani, was ruptured and torn asunder, the perineum escaping uninjured. Moreau gives, as the causes of this accident, “too great projection of the sacro-vertebral angle; a great inclination of the abdominal strait; a want of curvature of the sacrum; a want of solidification of the articulation of the coccyx; too great size of the inferior strait, especially behind; a contraction of the pubic arch and excessive depth of the symphysis pubis; the presence of an arm or foot;” and other causes, before mentioned.

Great diversity of opinion exists among writers, in regard to the relative number of cases of this accident: Of serious rupture, requiring some operation to restore the parts to their natural condition, the statistics may be easily obtained. These cases are few in number compared with the number of cases of labor. But, in regard to lacerations, while most practitioners consider this of unfrequent occurrence, some go so far as to make a case of

* Blundell's Lectures. Velpeau's Treatise on Midwifery.

primiparous labor, without laceration, an unusual event. Rigby says, "The anterior margin of the perineum, called *frænum*, is, we believe, almost invariably ruptured in every first case; but the laceration ought not to extend farther."

Meigs says, "The fourchette is a pretty firm fold of tissues, serving to unite the lower extremities of the vulva. It is said to be generally ruptured in a first labor, which I do not think is true. It is, doubtless, often broken, and no evil consequences commonly ensue from the accident." "Mr. Wilkin* had attended 4,000 cases of labor, and thought laceration, of any extent, very rare."

In nearly 900 cases that I have myself seen and attended, scarcely five have had any, even the slightest, giving way of the soft parts, that might not be denominated a fissure of the vulva. I have sometimes been surprised, after a labor was finished, when, during the passage of the head in its last stage, I have been quite confident, from the sensation to the hand supporting the perineum, that rupture, more or less, was taking place, to find, upon ocular examination, that it was the rapid dilatation or effacing of the perineum, under the hand, which was the cause of the sensation which had deceived me, and that no trace of the slightest fissure could be observed by the eye.

Dr. Simpson, in an elaborate paper has stated, in reference to the cervix uteri and perineum, "that fissuring and laceration are not, as has generally been conceived, rare lesions during labor; on the contrary, they are of very common occurrence; especially in primiparous labors." It is not the object of this paper to enter upon the question; and I shall merely, at this time, record my dissent to the statement of the universality of this accident.

The causes are numerous. It was formerly supposed to be by the pressure of the head; but latterly the opinion has been stated—which I cannot deny, but which, never having seen any reason to believe, I am inclined to think originated in the study, and not by the bedside—that it very frequently was caused by the sharp edge of the shoulder after the head had passed. The smaller dimension of the shoulders, in comparison with that of the vertex—especially when it is to be considered that one shoulder being delivered generally some little time before the other (thus diminishing the dimension of the part which would present at one time) renders rupture from that cause improbable, unless from some sudden expulsive act on the part of the patient or attendant.

The remote cause may be considered, in the majority of instances, to be the rigidity of the perineum; the proximate cause has generally been attributed to the want of proper attendance at the time when the head begins

* London Lancet; Report of London Med. Soc., Feb., 1852.

to press upon the soft parts. Support to these, by the hand of the accoucheur, would strike every one, either learned or ignorant, as a necessity, if he observed the appearances of the parts when the head threatens to pass through the slight and yielding barrier which opposes its exit. All instruction, whether from books or from teachers, inculcate support to the perineum at this period as all important; we cannot judge, therefore, how much actual benefit is derived from this act. Certain it is, that laceration and rupture do occur, occasionally, where this means is not neglected. Simpson says, "The proper management and support of the perineum no doubt modifies and diminishes this form of perineal lesion; but it fails far more frequently than is generally supposed in entirely preventing it."

Murphy says, "The young practitioner, fully impressed with the importance of preventing laceration, hardly ever commits the mistake of being too late in attending to this point. He very generally errs on the other side; he presses against the perineum a great deal too soon, and causes unnecessary heat and irritation in consequence, which rather retards its distention.

* * * Again, when the head is nearly protruded through the vulva, anxiety to save the perineum may be the cause of its rupture. For instance, if you attempt to draw the perineum back over the head, it will be stretched too suddenly over the bi-parietal measurement, the widest part of the head. If, on the other hand, you push the head too much forwards, pressing, with the pains, from the sacrum towards the pubis, the same effect will be produced in a different manner; you force the parietal portion of the head too rapidly through the vulva."

A more common cause, as I conceive, is the sudden and extremely forcible contraction of the uterus, combined with the powerful efforts of the mother, bringing the head down strongly upon the perineum, undilated and unprepared for dilation, with such force as to tear it asunder. The only case that has occurred in my own practice, where rupture requiring surgical treatment has ever occurred, was of this character. At nearly the full time, with her first child, a woman struck her abdomen against the banister, which was followed immediately by a discharge of blood. On being sent for, at 10, A. M., I found the hæmorrhage ceased; the os undilated; no pains. Desiring the woman to remain quiet, I returned at noon: there was no change. At 3½, P. M., she had experienced no pain. At 4½ I was hastily summoned, and found that, shortly after my leaving, she had felt a desire to evacuate her bowels, and went up stairs to use the chamber. While upon it, with one pain child and placenta were suddenly thrown into it. Some days after, she complained of soreness, and I found a rupture extending through the sphincter ani.

The misapplied and improper use of ergot sometimes produces this result,

from the same cause as just stated. Dr. Crisp (of London)* had seen but one bad case of laceration, and in that ergot had been given. I cannot but think that the administration of ergot, often so prompt to act, and with great rigor, has been a frequent cause of this lesion.

The position of the mother, at the time of the birth, may sometimes cause this injury. One case I have seen, where this rupture was effected, was where the woman was walking about the room at the moment the child was born. The erect posture may be therefore supposed to be sometimes the cause.

The first duty of the accoucheur is to strive to prevent this accident; one of the most grave in its consequences that can occur as the result of labor. This is to be effected by close attention to the progress of the labor, so that when the head is in a situation where a sudden expulsive act would force it rapidly through the vulva, or the parietes adjoining, the hand be then so placed that by gentle pressure it may guide the advancing part through the proper channel; to caution the mother against adding to the strength of the involuntary muscular contraction by any expulsive efforts of her own; and to restrain any improper movements of the patient at this very critical and painful moment.

From what I have said before, some injurious results may follow the improper pressure upon the perineum. It is in vain to attempt to prevent the advance of the head by any pressure. If the force, therefore, be presented exactly in the axis of the advancing portion, advance may indeed be arrested in that direction, but only to turn it in another. If the pressure be made directly upon the perineum, spread out thin over the vertex, the head will take a new direction and pass through the perineum, or through the intestine, and ultimately through the sphincter ani. Instances of this I have known, when the attending physician stated that "he foresaw a laceration or rupture of the perineum, and made, therefore, very strong pressure upon the perineum to prevent it, but that this result occurred in spite of his efforts." It is not improbable that nature would have effected the delivery with less injury than a recto-vaginal fistula, if not without any.

When the pains are very vigorous, and the labor is almost instantaneously finished, the only practicable way for the accoucheur to act is by making this pressure. Ramsbotham, Rigby, Churchill, Murphy, and many others, advise each different methods to accomplish this result, whether with the right hand or the left; with the palm or the fingers; with the hand horizontal or transverse; with a napkin or without. These distinctions are to me apparently useless. Much depends upon the position of the woman, whether on her back, or right or left side—upon which side the attendant

* Med. Soc., of London. Report, in *Lancet* of February, 1852.

is placed—whether he has equal facility in the use of each hand, &c., &c. It is sufficient to say that a certain result is to be accomplished, and to leave it to the natural capability of the attendant to devise the most practicable method for obtaining this end. The point to be desired is to so make pressure upon the perineum, as to guide the advancing part through the natural passage; and the hand should be so placed, and the pressure so made, as to form an inclined plane with the hand from the anus to the vulva, the pressure being strongest at the anus and graduated down, so that the resistance shall be the least in the direction in which it is desirable for the head to pass. The most convenient and effectual way to do this is the best.

When, however, the pains are less rigorous, and the danger of laceration arises from the continued pressure upon a firm, muscular or cicatrized perineum, and when the delivery is protracted, there is then time for consideration and action. Interference with this state of things may here, with propriety, be admitted. And here it is where injudicious treatment sometimes produces what is most dreaded. The administration of ergot at this point of the labor is often of great utility; but it should not be given without deliberation, for it is, as has been before mentioned, the frequent cause of injury.

Blood-letting from the arm will often produce relaxation of tonic rigidity. Full doses of opium, so as to arrest the pains until relaxation may be produced by the natural processes, has been tried with advantage. Inunctions with warm oil, and fomentations with cloths wrung out hot from a decoction of poppy-heads, hops, or simply in hot water, may have a beneficial effect, especially in conjunction with other general treatment.

All attempts to dilate the parts by forcible traction, with the fingers upon the rigid perineum, are hazardous, especially during the pains, and are generally of little avail. The judicious application of instruments under certain circumstances, I need not mention, as that operation falls under a different head than that now under consideration.

By far the most effectual method that I have seen for cases of this character is the use of anæsthetics. To those that have used chloroform and sulph. ether, in labor, I need not enlarge upon the wonderful effects of these agents in not only mitigating the pains, and greatly hastening to a close a labor threatening to be a tedious one, but in relaxing the tonic contraction of the muscles of the perineum. Chloroform is doubtless of great assistance and utility in surgery, and for relieving pain in diseased systems; but in no branch of the healing-art are its divine virtues so apparent or so important as in the cases of difficult labor; and I should think it actually criminal in myself did I not, at every proper opportunity, bear witness to its miraculous efficacy, not only in relieving the pains heretofore incident to mortality, but in rendering operations (such as turning, &c.) heretofore

impossible, feasible and easy, and a means of saving ten times, aye, one hundred times, the number of infants' lives that would otherwise be sacrificed, to that of one mother who has died under the alleged effects of this potential remedy.

Chloroform, in dystocia from rigidity of the perineum, is a remedy of invaluable utility; it saves not only the mother from rupture and lacerations, but the child from death. The excessive expulsive pains of the mother are diminished; the parts are not only relaxed by the powers of this agent, but time is thereby given to them to soften and dilate from natural influences, so as to render the passage of the child with safety. The life of the offspring is preserved, by restraining the pressure to which it would have been subjected from the continued contraction of the uterus while awaiting the relaxation of the muscular structure. As a remedy or a preventive of rupture of the perineum, it consists in its double power of diminishing the force of the voluntary, and, to a degree, of the involuntary, expulsive efforts, and particularly of its marked effects, in relaxing the sthenic contraction of the parts.

Quite recently, in a recent English journal, I have noticed a proposition made by a physician of some note, to overcome the effects of rigidity of the perineum by a surgical operation; not by dividing the perineum, and thereby to exchange a torn wound for a cut one, but by dividing the labia majora—and minora also, if necessary—on each side of the vulva, about half-way between the pubis and the fourchette. The end proposed, is firstly to facilitate the delivery; secondly, to substitute a cut surface for a lacerated one; thirdly, to place this wound where the contraction of the parts would naturally bring the divided surfaces in juxtaposition, and at the same time to escape the lochial discharge, which is ever flowing, and which would prevent the speedy union of the lacerated or even cut edges of the divided perineum if the section were made through it.

This proposed operation, for I do not know that it has been tried as yet, is in its aim very excellent, but it is liable to some objections. In the first place, it is not certain that the operation, in the performance will effect the anticipated results. Like Sigault's division of the pubis, it may not add any thing to the size of the part requiring to be enlarged. The distention is needed below, and we do not know that dividing the labia majora will compensate for the want of distention of the perineum.

It is, next, a question, how much resort should be made to an operation of some physical pain to the mother—the cause, at any rate, of much mental anxiety—which make two certain wounds, instead of one which is problematical; which may be prevented by means already mentioned; which may be trivial; which (the chances are greatly in its favor) may never occur. For my part, I deprecate this operation entirely; and it is solely

from my belief in the inadvisability and impropriety of this operation, that I have written this paper reviewing the whole subject. Once propose and sanction this operation, now considered to be very rarely, if not almost never necessary; and in a few years you will be astonished at the increase of rigidities of the perineum, where the lateral section was absolutely necessary.

When the labor is impeded by a state of the perineum and labia dependent upon œdema of these parts, punctures may be made through the integuments, to evacuate the obstructing fluid, in such localities as may be deemed advisable; and this will sometimes save a partial or more general rupture in these regions.

But in spite of all our precautions, or in the absence of any proper attendant, this dire accident has occurred. In what manner shall we proceed to relieve it?

If the rent is partial, or if transversely to the perineum, nature will generally effect a cure. In almost any case where the sphincter ani is not divided, the duty of the surgeon is limited to the simply keeping the parts cleanly, subduing any local inflammation, and continuing the divided surfaces in coaptation. This latter duty is best performed by guarding the patient to the bed, upon the side; and, having placed compresses or small cushions between the knees and ankles, to pass a roller firmly from the ankles above the knees; and this should be allowed to remain until the adhesions are made permanent. The great difficulty in effecting this, arises from the lochial discharge, and very frequently adherence is not obtained until this is arrested. Not unfrequently, the parts are thus lacerated and no curative means are used; yet nature, after the lapse of some months, alone perfects the almost complete restoration of the parts to their natural appearance.

When, however, the rupture is through the sphincter ani, the case is really serious. Not only do excrements from the bowels constantly pass away, giving the unfortunate sufferer continual pain and annoyance from the loss of this support to the contents of the abdomen; causing prolapsus of the uterus, of the bowel itself, sometimes of the bladder; and preventing the slightest action; but it deprives the sufferer, in consequence of the disgusting character of the discharge, from mixing with society, and not unfrequently rendering life a burden. In no cases are the humane offices of the surgeon more needed or more useful.

If the laceration is recent, the proceeding is more simple. The parts are to be kept in juxta-position, and this is the difficulty. The first requisite which is absolutely necessary, the same as in operating for *fistula ani*, is to divide the sphincter, to thereby prevent the opposite surfaces from being drawn apart. From the peculiar formation of the sphincter, the

fibres commencing anteriorly and posteriorly, this object is best effected by making double incisions, one on each side, midway between the vulva and the os coccygis. The quilled suture should then be applied to the rent, taking the stitches nearly an inch back from the edges. After the stitches have been taken, and before tying, in order to save the obscurity caused by the flow of blood were this done earlier, the edges of the wound should be carefully pared, if the accident is not a recent one. The parts being thus accurately brought together, the bowels, which should have been previously thoroughly evacuated, should be kept quiet by opium administered in sufficient quantity; the bandage applied as before, the woman placed upon the side, and kept perfectly quiet. This operation may require to be partially repeated, especially if done while the lochia is profuse. If the rent in the sphincter is united, the cut opposite may be allowed to heal. Any ununited spots along the laceration may be advantageously touched with caustic, or again pared, and the parts brought together by the interrupted suture, if necessary. Great difficulty is found when the septum of the vagina and rectum is torn, and particularly when there is a loss of substance in this or any part. If the septum is ununited, the contents of the bowels are constantly evacuated through the vagina, and the unpleasantness of the matter is left still remaining. Mr. Brown, in a recent paper read to the London Medical Society, gives two cases of complete cure of this awful complaint by the above-described means.

In the single case treated by myself, and before mentioned, the interrupted suture, first applied, tore out in the course of a few days. The quilled suture, on the second application, on the sixth day after confinement, was entirely effectual, excepting a half-inch nearest the vulva, which after a few weeks united without further application. In this case, a few fibres of the sphincter remained, and the septum was not divided.

PART II.—REVIEWS AND BIBLIOGRAPHY.

Human Anatomy, Physiology, and Hygiene. By T. S. LAMBERT, M. D., &c. New York: Ivison and Phinney.

THIS is a book intended for popular use; that is, for teaching anatomy, physiology, and hygiene to the people, and not to the profession. Its merits are, therefore, to be judged by an entirely different standard from that to which we should submit a treatise intended for medical men, and professing to exhibit these sciences in their exact and accurate condition.

It has been our fortune at one time and another to be called upon to examine, and that critically, all of the treatises upon these subjects, which are intended for general use in our common schools and academies. Some of them, we feel free to say, have every appearance and bear every mark of having been written by men who at the best are but superficially acquainted with those sciences, and unfit in every way to be teachers in them. We have seen, too, the effects of the instruction conveyed by these books, and risk nothing in saying that so far from the knowledge imparted by them being beneficial either to the pupils or the public generally, the reverse is true. Popular physiology, as it is termed, is not under these circumstances a useful but an injurious branch of knowledge. Instead of anatomy and physiology made easy, they have presented physiology and anatomy filled with errors and blunders. This, to our own mind, has constituted a very serious objection to the introduction of this study into the common schools, or in any way as a subject of popular education.

But another difficulty, and this also a radical one, has presented itself to our mind. Starting from the proposition, which, by the way, is unsound, that the study of the structure of our own bodies ought to be one of the earliest studies, because we ought to understand ourselves before we proceed to investigate others; they have argued that it is a simple thing to become acquainted with the structure and functions of the human body. Thus a smattering of information on those points, has been mistaken for complete knowledge and understanding of them. Now, if the matter ended here, it would be harmless. But it has not. Charlatans, availing themselves of some of the catch-words of these sciences, and talking loudly of liver, stomach, spleen, kidneys, and so on, have flattered the people into a belief that by their knowledge of those subjects, they could appreciate the industry, the study, and the talent which have been required in their investigation into the virtues of some herb, or the proper compounding of some syrup, which, with its omnipotent antagonism to disease, has been so long unknown

to the whole race of physicians. The result has been not only the abandonment of medical advice to follow the instructions of the pretender, which is in itself a small thing, but as its result, a sad and unnecessary waste of health and life. For this very encouragement of quackery we have felt not only authorized, but compelled when in the position to require it, to give our opinion and our influence against this class of books.

To these objections, this book of Dr. Lambert's is not open ; at any rate, in this *revised* form we do not find that there is any fault in these respects. We have an impression, which we cannot now verify, that some of his earlier publications were open to our first objection. We are happy to say that to the second they have never been. A physician of education and intelligence, Dr. L. can appreciate the advantages and the necessity of the advice of physicians in sickness, instead of following popular whims, or the vagaries of men of one idea. For this course, we conceive that Dr. Lambert is not only to be commended for having followed the instructions of truth, but to be supported in his manly position. We have some reason to believe that it has not been without pecuniary injury that our author has continued to hold his ground ; and for that reason, if for no other, he should be supported by the medical profession.

This book is adapted to advanced classes in schools and academies ; and to those looking for a text-book for such students, we cordially commend it.

From the fact that it is to physicians that committees, superintendents, &c. look for advice as to the books to be used in these departments, we feel that it is proper and necessary that the profession should be informed upon this subject, and therefore make no apology for introducing a *school-book* to the profession by an extended notice. In conclusion, we may add, that it is to our mind no inconsiderable recommendation to the book, that it is well printed, on good paper ; and that the numerous illustrations are creditable to the publishers and the artists.

E. H. P.

A Practical Treatise on Inflammation of the Uterus, its Cervix, and Appendages, and on its Connection with Uterine Disease. By JAMES HENRY BENNETT, M. D., Member of the Royal College of Physicians, &c., &c. Fourth American, from the third and revised London edition. Blanchard & Lee, pp. 430.

ALTHOUGH the author has made some additions and alterations in the arrangement of this book, it still remains to all intents and purposes the same work that it was when first published in 1845. The positions at first taken by Dr. Bennett, being the result of a large experience both in France and in his own country, were too well established to require any great modification to be made in them. Their correctness, too, has been fairly

established by the success with which they have met the very decided opposition to which they have been exposed. It must be a source of great satisfaction to their author to know that the principles, in uterine pathology, first developed by him, and the modes of treatment first pointed out by him as those based on a rational therapeutics, are now acknowledged and followed by the most eminent and most successful practitioners of this department of medical science.

This work has been so long before the profession, and its principles are so fully known to the profession, that we do not feel called upon to enter into an extended analysis of its contents, or review of its doctrine and principles.

We regret to say that in reading this edition we have felt that the publishers have not fulfilled their task quite as they should have done. It is true that the typographical errors which are noticeable do not prevent one from understanding the author; but they are always annoying, and can, by a little more care, be entirely avoided.

E. H. P.

Elementary Chemistry, Theoretical and Practical. By GEORGE FOWNES, F. R. S., &c, Edited, with additions, by Robert Bridges, M. D., &c. Blanchard & Lee. 1853. Pp. 555.

FOWNES' Chemistry has been so extensively in use as a text-book, that there is no need of a minute account of its contents or arrangement. This edition appears to be taken from the fourth London edition, which was edited by Dr. H. Bence Jones and A. W. Hoffman. Dr. Bridges' additions bring the different departments down to the present condition of the science, and thus fit the book to continue to be a favorite book with those who are instructing students in this science.

E. H. P.

PART III.—CHRONICLE OF MEDICAL PROGRESS.

PHYSIOLOGY AND GENERAL PATHOLOGY.

On the Influence of the Nerves upon the Vessels of the Tongue. By Dr. M. SCHIFF.

As the inferior surface of the tongue of living dogs well exhibits the various degrees of injection of the small vessels, and since, in experiments upon one side, we have before our eyes the normal condition of the other for comparison; the author also endeavored to ascertain whether there are nerves the paralysis of which effects a dilatation of the small vessels. He

made all his experiments upon large dogs, and limited himself to the anterior two-thirds of the inferior surface of the tongue. He always satisfied himself, in the first place, that both halves of the tongue were normal and of equal redness.

In dogs in which the hypoglossus had been severed for weeks or months, the paralyzed half of the tongue was no more injected; on the contrary, in many the paralyzed side was paler. But if the lingualis also of the same side were severed, in ten minutes, or even sooner, the paralyzed half was perceptibly redder than the other, and remained so. But since, after division of the lingualis, the insensible half of the tongue was crushed by the teeth, and consequently very much torn after some days, this reddening might be considered as the result of a mechanical lesion. But that this was not the case, the following circumstances prove: The reddening lasted weeks and months, whilst the mechanical injury was manifest only in the course of the first three weeks. After division of the lingualis, the tongue gradually diminished; and when this had reached a certain degree, it was no longer wounded by the teeth, and its torn borders cicatrized, even if the lingualis were removed in its entire free course. The redness dependent on injury of the lingual border always occurred immediately next to the border, whilst the neuro-paralytic reddening was diffused at a later period over the whole half of the tongue, even to the median line; and, at first, this reddening was seen still more intense along the border. When the author exsected the lingualis in animals otherwise uninjured, the color of the tongue beyond the inflamed border remained perfectly normal, except that occasionally lenticular reddish spots appeared. But if he also divided, in these animals, the hypoglossus, the paralyzed side suddenly reddened, even to the median line, and the reddening did not disappear again, if the exsected piece of nerve was sufficiently large to prevent a reunion. The same result occurred when the hypoglossus was severed, several weeks after the lesion of the lingualis, and after cicatrization of the borders of the tongue. From these experiments, the author concludes *that the tone of the small lingual vessels depends as well upon the hypoglossus as upon the lingualis*, in such a manner, that neither of these nerves has special control of the limits of its distribution, but that all the smaller vessels in the parts observed, are equally under the influence of both nerves, so that the one can perform vicariously the function of the other, and also that the extent of diffusion of the vaso-motory power of the two nerves *is identical throughout*.

Relying on the results of former experiments concerning the *regeneration of the nerves*, namely, that in a bisected bundle of nerves, the vaso-motory power is very quickly restored, afterwards the sensitive, and still later the motory, our author removed a large section from the lingualis of seven

young dogs, and merely severed the hypoglossus. As before, so now, a general reddening of the injured half occurred. In five dogs, the paralyzed half of the tongue became gradually paler, from the 6th to the 16th day, and both sides equally colored, although neither sensation nor voluntary motion had returned; the rhythmic oscillation of the muscular bundles, which was observed by the author in former experiments, took place here. In two dogs, killed in the third week, the two cut ends of the nerves were connected, but galvanic irritation of the central piece had no effect. In one dog, however, killed at the end of the fourth week, the galvanic irritation had a slight effect, but there was no voluntary motion of this half of the tongue. This first appeared in one dog in the fifth week; in another, still later. In two dogs, which, after four weeks, still exhibited the redness of the inferior portion of the tongue, there was no regeneration of the hypoglossus. In three dogs, the author took a piece out of the hypoglossus, and merely severed the lingualis. The reddening of that half of the tongue disappeared again from the fifth to the eighth day. Slight sensation manifested itself, first in one on the thirteenth day. In another the author, on the eleventh day laid bare the lingualis; the cut ends were united, the peripheric portion yet destitute of sensation. As the nerve was severed anew, the reddening returned again. In the third dog, in which sensation was again perceptible after nineteen days, our author divided the nerve in the fourth week, for the second time, and took out a large piece: the reddening immediately recurred, and did not again disappear.

If these experiments prove that the vascular paralysis had disappeared, that of motion and sensation still remaining, while either nerve was in the process of regeneration, the question also arises, in what manner one nerve can assume, in some measure, the functions of another. The action of the two vagi in the production of stagnation of blood in the lungs is similar, but with this difference, that in the tongue a motor and a sensitive nerve enter into reciprocal action. Each vagus gives off fibres to many ganglia distributed in the lungs; each ganglion receives fibres from both vagi nerves; but these ganglionic nervous fibres, and not the original vagus fibres, supply the vessels of the lungs. Now, as each cerebro-spinal vagus fibre entering into the ganglion diffuses its excitation to an indefinite number of ganglionic globules, so that the latter may simultaneously rest under the influence of several nervous fibrils entering into the ganglion,—even so in all organs which possess ganglia, or whose nerves traverse ganglia, will the division or paralysis of the nerves of one side not have a result which corresponds at all to that of bilateral paralysis. This hypothesis farther explains, why, in hemiplegiæ, the activity of the intestines remains undisturbed, why the division of the vagus of one side does not disturb the action of the heart, &c.

If this hypothesis is correct, we should find, in the anterior part of the

tongue, ganglia which receive radical fibres, both from the lingualis and the hypoglossus, and the nerves originating from these ganglia presiding over the vessels of the tongue. The author prepared, with this view, the finest ramifications of the lingualis and hypoglossus in man, in ruminants, dogs, cats, &c., and discovered even in the finest twigs, especially of the lingualis, even to the point of the tongue, small microscopic ganglia in very great number, in which unilateral fibres of origin and many (6, 9, even 11) emergent nervous bundles, with smaller primitive fibres, were visible. Several times, also, he succeeded in isolating ganglionic spherules with emergent nervous fibres, which very soon, almost immediately after their exit from the spherule, underwent repeated divisions. When the author divided the lingualis and hypoglossus at the same time, he found, after a certain period, all the nerves in the anterior two-thirds part of the tongue of dogs degenerated, as well those going to the ganglia as the numerous nervous bundles, consisting of small primitive fibres, which proceed from them. When the author had exsected a large piece of the lingualis, most of the filaments connected with the ganglia were altered in such a manner, that, where the incident branches were to be distinguished from the emergent, in the former frequently only a few unaltered primitive fibres were to be seen, whilst the latter in addition to a surplus of altered filaments always contained a considerable number of those which were normal. But, in the smaller ganglia, which were farther removed from the trunks, and whose radical fibres were themselves derived from ganglia, all the branches exhibited very many unchanged primitive fibres. The ends of the original fibres of the lingualis, which were distributed to the mucous membrane, were completely atrophied. After division of the hypoglossus (the lingualis intact) our author could distinguish in the radical trunks of the ganglia, single broader and altered primitive fibres: among the emergent he saw only normal fibres. If the latter does not prove that *all* the emergent fibres were normal, it nevertheless follows, that in this case far less fibres were altered than had become so by division of the lingualis.

In order, now, to decide whether the nervous filaments which go from the lingualis and hypoglossus to the ganglia of the tongue, are *homogenous*, vasomotory nerves, or whether it is sufficient that nervous filaments in general (motory or sensitive) pass to the ganglia in order to receive their power, the author instituted the following experiment: In eleven dogs, he exsected the central end of the lingualis as high as possible, and removed the peripheric end of the hypoglossus up to its distributions in the tongue; the cut ends he united with a slender silk thread, carried through the outer envelope of the nerves, and only slightly drawn. In the paralyzed half of the tongue the usual reddening occurred, but in five dogs diminished, from the fifth to the ninth day, and a few days later had entirely disappeared; in the other

six, however, it persisted continuously. Three of the five first, in which the half of the tongue exhibited neither sensation nor motion, were killed in the third week. The two cut ends were united by a greater or smaller node, partially fused with the neighboring parts; only in one instance were new nerve-fibres clearly to be seen. The peripheric extension of the lingualis exhibited everywhere, besides a preponderating number of altered fibres, yet many normal ones, partly of larger, partly of smaller diameter. In the nerves which were connected with the ganglia, the unaltered fibres preponderated over the broader nerves of the mucous membrane. The proper nerves of sensation were, like those in the interior of the muscles, all atrophic. Here a partial regeneration of the vasomotory nerves, and through the latter a union of the lingualis and hypoglossus, must have taken place. The two other dogs, in which neither sensation nor motion had returned, were killed in the eighth and ninth week. Here were the two stumps united in one uniform, continuous trunk, in which the point of division could no longer be recognised. The microscopic examination of one preparation gave results analogous to those just mentioned. This shows, *that the motory and sensitive fibres cannot unite, but that the vasomotory fibres arising in common from the lingualis and hypoglossus become regenerated.* In the six other dogs, no union had taken place.

As regards the condition of the vessels after division of the nerves of the tongue, those of the inferior surface and of the muscles of this organ acted in a manner analogous to those of other voluntary muscles, whose nerves had been divided. The author, therefore, presents his experiments upon this point in general. In order to apply pressure in the most equal manner possible upon the morbid and healthy side, he always injected both sides at once from a common trunk; the tongue from the ascending aorta, the inferior extremities from the abdominal aorta. After long-existing paralysis, in consequence of division of the nerves, the author found frequently, but not constantly, both the arteries of the thigh, the shoulder, and those of the tongue, together with their most important ramifications upon the paralyzed side, of somewhat smaller diameter than upon the healthy side. But this condition is probably only an indirect result of the nervous paralysis. For example, the circulation is impeded by the contraction of the muscles, and by the pressure resulting therefrom upon the smaller vessels; and since the lateral pressure of the blood in the larger vessels is thereby exalted, the latter must be distended; but if the muscles are paralyzed, the larger arteries appear smaller than upon the sound side. This view becomes the more probable, since in two dogs, six months after exsection of the hypoglossus without lesion of the lingualis, the author also found the arteries of the tongue smaller upon the paralyzed side.

If we examine a thin section of an injected muscle of the paralyzed side,

together with a similar section of the same muscle of the sound side, under a magnifying power of about twenty-five times, we see the larger vessels of both sides nearly alike, but in the piece from the paralyzed muscle many more small vessels of about $\frac{1}{50}$ to $\frac{1}{80}$ of a millimetre in diameter. We see indeed, upon the sound side small vessels of the same diameter, but only in particular parts, and these very soon diminish in size, since they ramify farther. Upon the paralyzed side, on the other hand, the vessels which have once reached this diameter, continue the same for some distance in their farther course almost unaltered; they do not diminish gradually, but pass almost immediately to vessels so narrow that they are imperceptible to a moderate degree of magnifying power. In like manner the small veins do not gradually increase, but pass suddenly to a greater diameter. The observation of the true capillaries is more difficult upon the paralyzed side, because they are covered by fat vesicles; here, also, the fine capillary meshes pass suddenly to broader vessels. *In the paralyzed parts, the smaller vessels which have contractile walls, are also perceptibly dilated.* (Waller.) The paralyzed side appeared always richer in blood-vessels, because only the dilated ones were visible, the finer of the sound side being withdrawn from the eye. In the skin, the same relations take place; so also in the periosteum and cellular tissue. This dilatation of the smaller vessels may be seen in the eye without injection, after division of the trigeminus, and in the ear of dogs after division of the nerves of the auricular muscles.

Notwithstanding the dilatation of the small arteries and veins, upon which the red color of parts rich in blood depends, the muscles of paralyzed parts appear no redder, but paler than normal. It follows, therefore, that the redness does not depend alone upon the vessels, but is also essentially inherent to the muscular tissue. If the latter is less nourished, it becomes also more colorless and transparent. Thence comes, too, the deposition of fat in the muscles of long paralyzed parts. For example, many fatty particles in part appear in the enveloping membrane of the bundles along the course of the vessels, in part certain muscular fibres themselves undergo a fatty metamorphosis. In consequence, also, of this infiltration of fat, long paralyzed muscular parts and especially the tongue become, after death, very quickly discolored, greenish, and soft. Fatty degeneration of the muscles is in part the result of their inactivity; for we frequently see it, though in small degree, after mere division of the hypoglossi, without lesion of the linguales. The cellular tissue of paralyzed muscular parts always consists of a greater number of layers, than in the healthy parts.—*Schmidt's Jahrbücher, January, 1854.*

On Diseases of the Heart. By Dr. TUPPERT, of Erlangen.

The author bases his treatise upon a case of pericarditis observed at the clinique of Prof. Dittrich, of Erlangen, and enumerates in conclusion those diseased conditions which produce a more or less *diminished contractile power of the heart*. To these belong:—

1. *Pericarditis*. Rokitsansky affirms that the influence of pericarditis consists in a paralysing of the muscular substance of the heart, which immediately leads to passive dilatation; that this effect is so much the greater the more the pericarditis has been of a chronic character, the exudation purulent, hæmorrhagic, or tuberculous; and that the dilatation especially becomes the more permanent, the more the congelations have formed themselves into a thick, dense, unyielding tissue enveloping the heart. The author adds, that it is not alone in the forms of pericarditis just mentioned, that heart-paralysis is threatened, but that also acute, even benignant, simple, sero-fibrinous exudations in the pericardium may induce the same condition. The bond of union between exudation in the pericardium and cardiac paralysis does not consist merely in the pressure which the exudation exercises upon the heart, thereby obstructing its motions, neither in a sort of imbibition of the surrounding exudation by the substance of the heart, but is based upon a well-known anatomico-pathological law, that in the more important exudative processes in any tissue whatever, and especially the mucous and serous membranes, the contiguous textures take part in a more or less important degree, in the form of acute œdema, or acute serous infiltration. Experience teaches that the quantity of the pericardial exudation is not the only determining cause, but that even in small exudations, especially purulent, the cardiac muscle presents the symptoms of paralysis; although in this latter case the whole blood-mass, and that circulating in the vessels of the heart itself, and nourishing and exciting the heart in an anomalous manner, may have their influence.

2. To pericarditis are joined *Myocarditis* and *Endocarditis*, diffused over a large surface. Here also diminished contractility of the heart is induced by participation of those parts of the substance of the heart contiguous to the inflamed points, in the form of hyperæmia and serous infiltration, and the swelling and sponginess induced thereby.

3. An important cause, though rarely occurring, consists in *sudden, immoderate distention of the heart with blood*. This cause never affects the whole heart in all its cavities simultaneously; it is, nevertheless, especially important when it occurs in the left ventricle. As an example may be mentioned the sudden repletion determined by insufficiency of the aortal valves, arising from acute causes, and immoderate distention of the left ventricle with blood; death follows in consequence of paralysis of the heart.

Far more frequent than this sudden, immoderate distention of the heart, is a cardiac paralysis, when this organ is suddenly or gradually put in the condition of fatigue in consequence of previous severe efforts, especially from the existence of mechanical hindrances. This happens particularly in hypertrophied hearts.

4. In the course of acute affections, as typhus, acute exanthemata, &c., already during life a remarkable relaxation of the muscular substance of the heart occurs, with its well-known symptoms, as if the expression of an affection continually becoming more severe. The cause of this symptom is here, either a local one, that is, an anomalous nutrition of the heart by anomalous blood; or, what is more probable, a central one determined by an anomalous nutrition of the brain and its nerves, and anomalous innervation of the heart thereby induced. In the corpse this symptom has its counterpart in the so-called passive dilatation, collapse, lacerability, decoloration, saturation with red blood. To this diminished innervation of the substance of the heart dependant on the central apparatus of the nervous system, are joined on account of similarity of cause, all those cases of acute and chronic diseases, belonging to the class of brain diseases, in which, through whatever cause, the innervation becomes altered.

5. An important diminution of consistence of the cardiac substance accompanies fatty disease of the heart, whether it be that this depends upon an accumulation of an unusual quantity of fat upon the surface of the heart, or upon fatty degeneration of the cardiac muscles. In all these fatty diseases a disproportion of tissue to the powers of innervation takes place, and, consequently, diminished contractile power.

6. The atrophic conditions of the heart, by whatever determined, are always accompanied by diminished contractility of the heart-muscle.

7. *A priori*, another cause may be conceived, to which, hitherto, little reflection has been given, namely, the saturation and sponginess of the heart-substance from imbibition in hydrops pericardii.

8. If we comprehend under the name diminished contractility of the heart, also those conditions in which the texture of the heart presents no perceptible alterations, then is there a condition to be considered, which indeed occurs symptomatically, but may also occur absolutely. It is neurosis of the heart (neuralgia plexus cardiaci), which is announced, in many cases at least, not by immoderate palpitations of the heart and excitation of the vascular system, but by functional depression of its central point. The observation of such a disease, with its subjective sensation of sinking, with the feeling that the heart is pressed together, held fast, that it ceases to beat, with the perception of disturbed respiration, of symptoms of pressure upon the heart, of small pulse, of slight or severe swooning, &c., teaches that we have to do with diminished contractile power of the central organ of circulation.—*Schmidt's Jahrbücher*, Jan., 1854.

OBSTETRICS, AND DISEASES OF WOMEN AND CHILDREN.

Herpes of the Vulva. By F. J. LEGENDRE, D. M., Physician to the Hospital of Loureine.

Etiology.—The causes of the development of herpes about the vulva, are both predisposing and exciting. These two orders of causes may act separately, but most commonly they are united in the same person.

Among predisposing causes, I will mention obesity, warm weather, the natural acrimony of the secretions from the vulva in some women, the menstrual periods, and pregnancy.

In very fat women, the genito-crural folds, in consequence of the protuberance and contact of the upper and inner part of the thighs, present a very marked depression, or cavity, in which the labia majora are closely packed. These parts, in which active secretion is constantly taking place, being thus in intimate contact, it is readily seen that this arrangement will favor the development of herpes of the vulva.

There are some women, especially among those of a reddish or very dark complexion, whose sweat and whose mucous and sebaceous secretions are very abundant, very acrid, and very offensive. This state of things, which is habitually produced in some women through an organic disposition, is often caused in many others by hot weather; thus, these two causes, both isolated and united, may be considered as favoring the development of herpes.

The approach of the menstrual period is also a predisposing cause of herpes of the vulva: at this time the vulva participates in the congestion of the pelvic organs, furnishes a more active and abundant secretion from its glandulæ, and is often the seat of pruritus; circumstances which are fully adequate to explain the tendency of herpes to appear at this time. Thus it is that some women, a day or two before each menstrual period, are affected with a herpetic eruption, consisting of one or more groups of vesicles, which either dry up or give rise to superficial erosions. These erosions persist as long as the periodical flow continues, and finally cicatrize without leaving any scar, a few days after its cessation.

Finally, pregnancy, by interfering with the capillary circulation of the abdominal organs, as shown by the violet and sometimes almost black color of the mucous membrane of the vulva and vagina, and by exciting in most cases an abundant creamy or muco-purulent discharge, is equally a predisposing cause of herpes. Indeed, the abundance of the discharge which bathes the vulva, added to the stagnation of the blood, excites pruritus, the effect of which is to favor the development of herpes.

Exciting Causes.—Discharges from the vagina are a frequent exciting cause of herpes of the vulva; but this cause acts only in those cases where the discharge, constantly bathing the vulva, irritates it by its abundance and purulent nature, and excites pruritus which the patients endeavor to allay by scratching themselves with their nails, or rubbing themselves with their chemises, which are often of coarse material, and always soiled and stiffened by the dried matter of the discharge. A vesicular eruption appears almost immediately after such repeated irritations, and, when questioned on the origin of their symptoms, women reply, that they first noticed an abundant and greenish discharge, followed by itching of the parts, and, after scratching themselves, small pimples or painful erosions of the vulva appeared.

Another exciting cause of herpes of the vulva is want of cleanliness, which acts in nearly the same manner as purulent discharges from the vagina. From this cause, the sweat, and the secretions from the mucous membrane and sebaceous follicles, which are so active in this region, are retained in contact with the part, and, undergoing decomposition, irritate the vulva, and excite pruritus, which is soon followed by a vesicular eruption.

Frequent and long walks often excite herpes of the vulva, from the friction between the latter and the upper and inner part of the thighs, and from an increase of the secretions which lubricate the parts, thus exciting irritation, which is well calculated to give rise to this eruption. It is true, however, that this cause acts especially on fat persons, and more particularly in hot weather.

The last exciting causes which I will mention are, in adults excessive coitus, and in young girls masturbation and attempts at rape; the latter consisting, in most cases, of mere friction of the surface of the vulva with the virile organ. But it is important to be noticed that, in these cases, the cause is often complex, from the coëxistence of irritation from a vulvo-vaginal discharge, which either depends simply on the amount of violence exercised, or has been communicated by the guilty party; but, whatever its nature, the contact of acrid and irritating matter with the delicate epidermis of these parts, acts as an exciting cause of herpes, in addition to the act of violence.

General symptoms of herpes of the vulva.—Herpes of the vulva appears under two different aspects, according as the eruption consists of one or two clusters of vesicles, or a large number of vesicles scattered or grouped together. In the first case, the labia majora are neither red nor tumefied, nor the inguinal ganglia increased in volume; the patient experiences scarcely any pain, and only a slight smarting sensation in the part. The

disease is rarely observed at its outset, when it is characterized by a group of five or six globular vesicles, of the size of a millet seed, filled with a perfectly transparent, serous fluid, of a citrine color, and surrounded with a rosy areola of greater or less extent; generally, when first observed, the vesicles have become flattened, wrinkled, and withered, and the serous fluid within, lactescent; or they may have become enlarged and have run together, tending to form a bulla beneath the epidermis. Again, not unfrequently, when the patients are examined, the vesicles or bullæ have disappeared; and in that case the affection is recognised by a very superficial erosion, which is rounded, grayish, surrounded with a rosy areola, and situated either on the external or internal surface of the labia majora. This erosion, resulting from the removal of the epidermis from the vesicles, and from the narrow interval which separates them, might deceive a person who was not on his guard, and be taken for a chancre, especially when situated near the entrance of the vagina, and, above all, at the fourchette.

When herpes of the vulva occupies numerous points on the external and internal surface of the labia majora, and even, as often occurs, on the perineum and margin of the anus, the patients complain of a burning, smarting sensation, and severe pain in the parts. This pain is exasperated by the contact of the urine in micturition, and also by walking, which is sometimes almost impossible, it is so painful. On examining the parts, the labia majora are found to be more or less tumefied and reddened, and also the margin of the anus, if it participate in the disease; in the next place, our attention is immediately drawn to the presence of numerous ulcerations on the external or internal surface of the labia majora, or, more particularly on their free border. Sometimes these ulcerations are confined to the vulva; and sometimes the margin of the anus, the perineum, and even the upper and inner surface of the thighs, corresponding to the free borders of the labia, present similar ones. These ulcerations may be covered with small brownish scabs, or their surface be free, and discharge a sero-purulent or purulent fluid; in both cases they present the following characteristics: they are generally superficial, constituting erosions rather than true ulcerations; they are regularly rounded, their edges clearly cut, their floor grayish; their size that of a very small lentil when they are isolated, but larger and more irregular when they result from the union of several neighboring ulcerations. Though these ulcerations are generally very superficial, and involve only the deep layers of the epidermis, some of their number simulate true chancres by their more elevated and perpendicularly cut edges, and their grayish floor. Finally, the illusion is heightened by the development of small rounded ulcerations, with a grayish floor, on those points of the internal surface of the thighs which correspond to the ulcerations on the free border of the labia. These ulcerations appear to be produced by the inoculation of a

virulent fluid furnished by the ulcerations on the labia, whilst they are, in fact, only the effect of the presence of a simple irritating liquid upon two corresponding surfaces in contact.

The practitioner, in pursuing his investigation, rarely fails to find other lesions which indicate the true nature of these ulcerations, viz.; globular vesicles, either isolated or more frequently in clusters of five or six, of the size of a millet seed, distended with a transparent serosity of a citrine color, and often surrounded with a narrow, rosy areola. When these vesicles are a day or two old, their characters change; their fluid becomes lactescent; the epidermis is wrinkled, withered, and finally torn; then the superficial layers of the cutis are exposed; and thus the original herpetic vesicle, by undergoing successive modifications, or a kind of gradual degeneration, is transformed into an ulcer of greater or less depth. Sometimes instead of the separate vesicles breaking, they first extend over a wider surface and unite, giving rise to an elevation of the epidermis resembling a bulla, which finally bursts and sometimes becomes covered with a pseudo-membrane. At other times, the fluid included within the vesicles, after becoming sero-purulent, becomes concrete, forming a brownish scab of the size of a hemp seed, and covering a small ulceration. The clusters of herpes are easily discovered, when they are situated on the internal surface of the labia, at the margin of the anus, or on the perineum; but if they be not found at first, before denying their existence, we should carefully examine the external surface of the labia majora, stretching the skin so as to efface the wrinkles and folds, in the midst of which the vesicles are often concealed. In the cases which have come under my observation, I have almost always found some of the characteristic vesicles among the numerous ulcerations scattered over the vulva; but it is evident that this feature may finally disappear, when the ulcerations are kept up beyond their usual duration by negligence, want of cleanliness, or acrid secretions. Still, these cases are rare, for the causes which keep up the ulcerations continue to generate new vesicles also.

Whenever the vulva presents several herpetic clusters, the lymphatic ganglia of the internal portion of the groin are always tumefied and slightly sensitive on pressure, the tumefaction and sensibility being proportioned to the extent of the eruption and the number and depth of the ulcerations. This engorgement sometimes acquires the volume of a small pigeon's egg, but it projects but little from the surface, and its size is better appreciated by the touch than by the eye; I have never seen it accompanied by redness of the skin, nor terminate in suppuration; but its entire resolution is quite slow, often not taking place till some days after the ulcerations are already cicatrized.

Prognosis.—Herpes of the vulva, in itself considered, is a very innocent disease, and its prognosis possesses so little gravity, that it would scarcely deserve special consideration, if it were not that its situation, and the ulcerous form which it affects, may become the source of error, very prejudicial to the patient, and even to the reputation of the physician. Considering the prognosis of herpes of the vulva, therefore, not absolutely, but relatively to the circumstances in which it is developed, we see that it rests almost exclusively on the time that it takes to heal. Thus, when this eruption and its ulcerations appear on the approach of, or during the menses, after venereal excesses, after too great exercise on foot, or from want of cleanliness—since these causes are temporary or easily remedied—the herpes disappears rapidly, and its prognosis will be favorable; on the contrary, it will be less so when it is developed under the influence of a constitutional diathesis, or a purulent discharge from the vagina—a disease which is always slow in disappearing; and in this case frequent relapses will occur, or the eruption will be kept up for a long time, either because many successive crops of vesicles are developed, or because the ulcerations succeeding the primary group of vesicles are slow in cicatrizing, or even increase in depth, soiled as they are by the purulent matter which flows from the vagina.

Treatment.—When herpes of the vulva consists of one or two groups of vesicles, it is an affection of little importance, and the most simple means are sufficient to dissipate it. The patient should be directed not to walk, to resist the severe pruritus which she experiences, and to apply frequent lotions of a cold decoction of nightshade, unless the menses be present, when the lotions should be warm.

But when, from the patients' indulging in walking, or allaying the itching by scratching themselves, the vesicles have assumed the form of painful ulcerations, various sedative remedies should be employed; such as baths prolonged for an hour in a warm decoction of bran; the constant application of cataplasms of potato starch and marsh-mallow water, renewed every five or six hours and applied directly to the vulva, each application being preceded by a lotion of a decoction of nightshade, to remove any remains of the preceding poultice which may have become sour. The horizontal posture and diluent drinks, joined to a mild and spare diet, make up the constitutional treatment. Injections of warm water, or of a decoction of leaves of nightshade, should be used when herpes occurs during the course of vaginitis; but if during the catamenial period, the treatment should be confined to keeping the horizontal posture, and the frequent use of warm lotions. Under the influence of these means, the severe pain which sometimes attends the herpetic ulcerations, rapidly subsides; and a similar effect is produced on the grayish aspect of the ulcerations, which often disappears

within twenty-four hours, giving place to a rosy color of the surface, and the ulcerations themselves cicatrize completely by the fifth or sixth day. If among the ulcerations which are sometimes developed upon the vulva in considerable numbers, there be some that retain their sensibility, and refuse to cicatrize in spite of the use of these emollients, either because their situation (as in the neighborhood of the vagina, at the margin of the anus, or on the perineum) exposes them constantly to the contact of irritating fluids, or to repeated friction, it is well to substitute for the emollients slight cauterizations with the solid nitrate of silver, which destroys the sensibility of the ulcerated surfaces and favors their cicatrization. Finally, if, after cicatrization, a tendency to hypertrophy show itself in the ulcers, we may anticipate their spontaneous disappearance, and hasten their resolution, by touching them repeatedly with nitrate of silver, or, what is also very good, with oil of cade.—*Archives Générales de Médecine.*

SURGERY AND SURGICAL PATHOLOGY.

Observations on the Human Eye by means of the Speculum Oculi.

[The first and second numbers of the *Deutsche Klinik* (Berlin) for January, 1854, contain an able article by Dr. Oscar Sæmann, on the *Speculum Oculi* of Helmholtz, and its application to the diagnosis of diseases of the organ of vision. The first part of this paper is chiefly devoted to a description of the mechanism of the instrument, the manner of its application, &c. The second part is that which we present to the readers of the MONTHLY, under the above title. H. N. B.]

In order that we may be able to distinguished with our eye the pathological alterations existing in any organ, it is necessary that we should be familiar with the appearances which that organ presents in its normal condition. It becomes necessary, therefore, that I here give a brief sketch of what we perceive in the healthy eye by means of the *speculum oculi*.

If we give the reflector such a position that it sends the rays of the taper passing through the convex glass into the eye to be examined—by which the dark spot, which corresponds to that point of the speculum not covered with foil, must fall directly upon the pupil—and look through the transparent portion of the reflector, we see the pupil clearly illuminated. The degree of its lucidity is, under otherwise equal circumstances and with a sufficiently dilated pupil, different in different eyes, and depends upon the greater or less capacity of the background of the eye to transmit and reflect light. A part of the rays of light, for example, is reflected by the retina

and its vessels ; another part passes through these to the choroidea. Of this transmitted light, again, one portion is reflected by the vessels of the choroidea, whilst another is absorbed by the pigment of this membrane, and the remaining portion penetrates the more transparent parts of the same, to be at last reflected by the sclerotica. The stronger the pigment of the choroidea is developed, the more the light is absorbed ; the less it can penetrate, so much the more dimly will appear the illumination of the pupil : the less the pigment is developed, the more the light is reflected ; so much the clearer will be the pupil. The color of the light presents all shades, from whitish-yellow to yellowish, from yellowish-red to the finest rose, which latter color I observed in an albino. Van Trigt directs attention to the fact, that the abundance of the choroid pigment is in direct ratio with that of other tissues, especially the hair ; and that consequently in blonde individuals the pupil appears much clearer than in individuals with brown or dark hair. If we now apply to the instrument the concave lens corresponding to the state of refraction of both eyes, we perceive, in the background of the eye, vessels of larger or smaller size, which sometimes run isolatedly, sometimes so that artery and vein lie together. The background of the eye itself appears in a reddish light, which passes to a dark brown when the pigment is very abundant, but shines of a clear rose color when the choroid pigment is less. The particular parts of the retina also do not appear equally colored ; the color is clearest round about the *optic nerve* and grows gradually darker towards each side. If we direct the eye somewhat inwards, it is not difficult, after some practice, to discover the *Papilla nervi optici*, which exhibits a truly splendid appearance. It presents itself generally as a circular, more rarely as an elliptical, clear white disk, which, shining like the full moon in a blood-red sky, is more or less nettly bounded by the surrounding parts, and at its periphery is girdled by a dark, often not wholly closed ring of various breadth. At times, here and there, single dark spots may be distinguished upon the shining disk, caused by little inequalities of the *papilla*. Somewhat inward from its middle point issue the *Arteria* and *Vena centralis*, the first of which is marked by its clearer red color and smaller circumference, sometimes single, sometimes forming a coil. For the most part these vessels extend upwards and downwards over the papilla, and divide near its periphery into two or more branches ; but they do not always take so regular a course, but wind about in all directions, sending out their twigs over this disk. The artery, as well as the principal trunk of the vein, exhibit at the summit of their curve a light streak, which proceeds from the reflected light, and is not observed in the neighboring venous branches, because their walls are too little arched, more level. The falciform line of shade lying inwards from the papilla, which Helmholtz has

always, and Van Trigt never, seen, I have also at times, but not always, been able to discern.

If we cause the eye of the individual examined to look directly at the image of the taper present in the reflector, we have before us the point of direct vision, the *macula lutea*. Helmholtz says it rises less abruptly from the surrounding parts, has a darker gray-yellow color, and shows no vessels. According to our observations, however, it is distinguished in nothing from the rest of the background of the eye, neither by a different color or a greater want of vessels.

If we examine the normal eye with convex glasses, through which the eye of the observer is adapted also for the anterior parts of the same, *cornea*, *iris*, *lens*, *corpus vitreum*, we see the magnified pupil shine with uniform clearness.

After this short description of that which we perceive by means of our instrument in the normal eye, I proceed to the observations which we have made upon the diseased eye.

Diseases of the Lens.—The most frequent diseases of the lens are opacities, *cataractæ*. When the opacity is far advanced, and its color a clear gray, there is no difficulty in the diagnosis; but the cognizance of opacities in their first commencement is extremely difficult, and the difficulty is increased from the fact that in elderly persons generally the pupil does not appear of a pure black. But, by the aid of the speculum it is possible to detect even the slightest opacities of the lens and its capsule, since the latter are very accurately defined when the background of the eye is illuminated, and we examine through a convex lens of 3—6" focal distance.

We have observed commencing opacities of the lens, which were wholly inaccessible to observation according to the ordinary methods of examination, in 24 individuals,—eight of whom had a perfectly normal vision, and were examined only *experimenti causâ*, the rest suffering from disturbed or extinguished vision, which had its origin, however, in other diseases of the eye.

The most frequent opacity was that of a nucleiform cataract (*Kernstaar*), and was absent in only three of these 24 individuals. Upon application of a convex lens, No. 3, it was seen in all gradations of size, from the smallest point to a deep black disk of nearly 1" in diameter, and was always conformable, no single dark atoms being distinguished as composing the opacity. Its periphery was mostly circular, in two cases elliptic, with the greater diameter running obliquely; also dentate, stellate. It occurred in 20 cases bilaterally, and had but rarely reached the same stage of development in both eyes. This deeply dark disk was sometimes surrounded by

gray, irregularly formed specks, which, in one young lady, represented a second circular concentric disk in both eyes; in other cases by a large number of dark points of various size, but which never equalled the nucleiform cataract, and were sometimes very irregularly placed, sometimes appearing, more or less clearly, as a concentric layer, sometimes as a vinctular, or as a stellar stratum. We saw these dark points, also, in those three individuals in whom the nucleiform cataract was wanting. In seven cases an opacity was seen at the outer border of the lens, which twice was encircled by a ring accurately defined and circular within, once by two concentric rings, separated from one another by a clear line, and consisting of thickly crowded points, while four times dentations were sent out towards the middle of the lens, by which the existing nucleiform cataract was rendered dentate or stellate.

The examination of more perfectly developed opacities of the lens, which may be already diagnosticated by the mere sight, shows that such cataracts always have a greater circumference than one would suppose from an exterior view. Here the speculum can accomplish something in the determination of the time at which the cataract will attain sufficient maturity for operation, since we have, in the visible progress of the opacity, a sure guide independent of the self-delusions of patients. In the examination of such strongly developed opacities of the lens, at times a deep black figure appears to us, which consists of three radii proceeding from the pole of the lens, growing smaller towards the equator; their direction corresponds exactly to the meridian lines, and there is no doubt that we have to do in such cases with the cleaving of these, often observed in cataractous lenses. Since the meridians of the anterior and posterior hemispheres of the lens have an opposite course, so we can easily determine from the course of these dark radii in which hemisphere the cleaving has taken place.

For the exact history of the development of cataracts, the speculum will be of the greatest use. Already it is proved with greater certainty that most opacities of the lens, taking their origin in the nucleus, extend in a centrifugal direction. This centrifugal extension is at times met by a second opacity, beginning at the border of the lens, and progressing in a centrifugal direction; but the latter is exceedingly rare. The opacities of the lens are composed of single dark atoms, which increase in number, become thickly crowded together, and at last conglomerate to a conformable mass. This conglomeration often proceeds with a certain regularity, and two special forms of it may be observed, namely, either these dark atoms unite to form concentric rings, or radiate lines. Only the opacity of the nucleus of the lens has appeared to us, hitherto, always conformable; probably the cause of this lies in the denser stratification of the fibres which exist in the nucleus, and the want of abundant uniting tissue. If the specu-

lum enables us on the one hand to recognize the least beginnings of the cataract formation, so also, on the other hand, it often teaches us that there is no opacity of the lens existing, when, from the mere sight, we should conclude that such was the fact. The pupil, especially in older persons, is not a pure black; it appears gray-yellow, whitish-yellow. Several cases have occurred to me, in which physicians had declared to eye-patients that they had a cataract, and might be eventually cured by operation, when the speculum proved that there was absolutely no opacity of the lens existing, and that the disturbance of vision was dependant upon a very different lesion of the eye.

Diseases of the Corpus Vitreum.—The circumstance that the vitreous body is almost completely withdrawn from observation, without illumination of the background of the eye, had made the diagnosis of its diseased conditions impossible. The disturbances of vision dependant upon this body, on account of the want of all externally perceptible alterations, were referred to lesions of the retina, and placed in the Augean stable of amblyopia and amaurosis. The speculum now teaches us, that diseases of the vitreous body, especially obscurities of the same, occur no more rarely than in the lens. These obscurities are of a twofold character:—either the vitreous body loses its natural transparency, the capacity to transmit rays of light to the retina, in which case, by the application of a convex lens, No. 6, the background of the eye appears wholly or in greater part very dimly illuminated, and the retina-objects to be found behind the obscured spots, as well as the vessels and papilla of the optic nerve, are either not at all or only very indeterminately made visible by the concave lens; or black corpuscles are found floating in this body.

The first, from the analogy of opacities of the lens, we must consider as true obscurations of the vitreous body; they appear to us like cloudy opacities, which have a diffused extent, and almost always involved the greater part of the vitreous body. In sixteen individuals, six of whom were completely blind, and the rest all suffering from important disturbances of vision, we diagnosticated this diffuse obscurations, since the retina-objects could not be perceived by any concave lens, and the background of the eye appeared dim, as if washed away. A confounding with opacities of the lens could not occur here, since cataracts, which so materially obstruct the vision, could scarcely escape an exterior view, to say nothing of the examination by the speculum. Besides, in five cases there were simultaneously slight opacities of the lens, which, however, appeared as small points, and could by no means explain the above symptoms. The conclusion may be drawn, that obscurations of the vitreous body of relatively slight intensity produce serious injury to vision, whilst cataractous lenses, which show ex-

teriorly a tolerably intensive gray color, often allow the patient the reading of coarser prints.

Still more frequently than these obscurations, we observe those dark floating corpuscles in the vitreous body, which are set in lively motion by the slightest oscillations of the globe of the eye, and cross before the clear, shining pupil in the most different directions. These corpuscles present the most manifold forms; sometimes they resemble small coiled serpents, sometimes polyhedric cells, sometimes long, irregularly formed coagula, sometimes they appear as innumerable floating points. We observed, also, the most various forms in the same eye, and, indeed, sometimes in such great number, that the vitreous body, after a movement of the globe, appeared like dirty swamp-water. When the globe returned to rest, these corpuscles sank to the bottom from the force of gravitation. We made this observation upon 26 individuals; four of them had normal sight; the most, however, complained to us of their own accord that they saw dark bodies floating in the air, and the description which they gave of their form frequently agreed very exactly with that observed through the speculum. They were often very short-sighted, so that they required acute concave spectacles. The vessels of the retina and choroidea were mostly clearly visible, nevertheless, we were obliged to use strong concave glasses, which corresponded well with the nearness of vision.

Concerning the nature of these corpuscles, nothing definite can be said; pathological anatomy and microscopy must furnish an explanation of them. We have not, hitherto, detected in them a spontaneous motion, so that we cannot at least consider them *living* entozoa. They may, indeed, often be blood or exudation-coagula; and the circumstance that in two cases we found a tolerably extensive extravasation of blood upon the retina, favors this view in some measure. From their exterior form, we might often also be led to consider them as cells; but it would be remarkable that such cells should remain so many months in the same stage of development. Perhaps they are many times residua of the lamellæ of the vitreous body, which, according to Bowman, exist in early life and later are broken up.

The frequent, manifestly swift movement of these corpuscles in the substance of the vitreous body, which, according to Kölliker's latest investigations, consists, in adults, of a more or less consistent mucus, permits us, nevertheless, to decide upon the fluidification of this body with some certainty, which accords also with the short-sightedness of such patients so frequently observed by us. Fluidification of the vitreous body makes its coefficients of refraction smaller; but this is not sufficient to explain the frequent high degree of nearness of vision, if we do not admit that through this means the diameters of incurvation of the refracting media are altered. In one man, who complained that upon motion of the eye he saw small,

clear, shining corpuscles floating about in the air, I observed in the vitreous body little glittering points, visible sometimes here, sometimes there, which disappeared upon rest of the globe. Could they have been crystals of cholesterine?

Diseases of the Retina and Choroidea.—The background of the eye appears to us, as we have already described above, as a field of vision shining with a reddish light, intercrossed by larger superficial vessels of the retina sending out single smaller branches, and by a deeper lying convolute of smaller vessels of the choroidea, upon which the *Papilla nervi optici* is accurately delineated through its intense brightness and the central vessels so clearly visible upon it. The truly surprising clearness with which all this is seen, did not allow Helmholtz to doubt that vascular distentions, varicosities, exudations before the retina, in its substance, and between the retina and choroidea, would be easily recognized. The observations hitherto made public have dispelled every doubt; and we also have not rarely observed pathological processes of the retina and choroidea. If we have not been able hitherto to recognize all visible abnormalities in their true essence, if we even overlook much which is abnormal, nevertheless, we can already assert that a large number of amauroses, which have heretofore been considered as neuroses, depend upon visible textural alterations of the retina and choroidea.

Most frequently we have observed distention of the vessels of the retina, by which their main trunks appeared enlarged, sent out many branchlets not formerly visible, and the whole background of the eye appeared of an unusually intense red color. It is true, that the size of the vessels, the number of their branchlets, the color of the background, are very different in different men, and, therefore, error is very easy; but the correctness of the diagnosis is favored on the one hand by the subjective symptoms, the pain in the eye and frontal region, the feeling of unusual fulness in the eye; on the other hand, by the frequent favorable result of treatment by the abstraction of blood.

The true inflammation of the retina with exudation seems also not to be rare. The spots covered with exudation appear, sometimes, whitish, reflecting the light strongly; sometimes reddish; sometimes they have a more greenish tint, and when of greater extent, are surrounded by an irregular dark border; sometimes, especially upon the *papilla*, they appear as dark specks. The exudation-mass, for the most part, encloses the vessels of the retina in such a manner that they become completely invisible, or at least appear only very dimly as white-red, not well defined marks. Only twice have I seen tolerably clearly the vessels of the retina running over the exudation-mass. In one case, already alluded to above, in which the ves-

sels of the retina were surrounded by a reddish exudation, we observed simultaneously in the vitreous body those coagula-like corpuscles, which probably had become loosened from the floor of the retina, and floated free in the vitreous body.

Injuries of the retina and its vessels from external violence very rarely occur, and are then mostly connected with such important lesions of the whole bulb, that examination with the speculum can furnish no results; it may also happen that a cataract needle in unskilful hands, or the lens dislocated by it, injure the retina. We have not observed cases of this kind. Van Trigt has wounded the internal eye of cats, dogs, and other canines, with needles, and in this manner made highly interesting observations upon the results of these injuries and the cicatrization of the wounds. On the other hand, we have observed a case of spontaneous rupture of the central vessel, which I may be allowed to report in detail.

A man, 55 years of age, plethoric, was suddenly seized with giddiness, and sank into unconsciousness. As he awoke from this condition after an hour, he was blind in his right eye, which before was perfectly normal. The physician called first, made a venesection, and otherwise conducted the treatment *lege artis*. Upon the fifth day after this mishap, he came to my office to consult me on account of his eye. The pupil of the right eye was more strongly dilated than that of the normal left eye; both had a yellowish grey mucus, otherwise nothing abnormal exteriorly. The examination with the speculum gave the following result:—the *papilla nervi optici* was accurately bounded on the outer side, nevertheless even here was more dimly illuminated than usual; at the inner and inferior side it was covered with a red blood-coagulum. From the upper border descended a vessel, which, irregularly dentated, terminated free; all the other vessels of the *papilla* were covered with the coagulum. Otherwise all is normal. There could be no doubt that here a laceration of the central vessel had taken place at the point where it issues from the *porus nervi optici*. Ten days later, the coagulum, now of a less dark red, was still visible only at the inner border; all the rest of the *papilla* was of a greenish color, with occasional clear spots interspersed; out of its midst was now seen passing downwards a rose-colored, not well defined line, which glimmered but dimly, and at its superior border vessels were distinguished which represented two arches. In the vitreous body floated single dark specks. The power of vision continued totally extinguished.

Morbid dilatation of the vascular walls we have never observed except in veins, which then appeared like dark, undulatory or spiral cords running over the field of vision. We never found them upon the *papilla*.

In a young man, who saw objects perfectly clearly only in a bright sunlight, but recognized them very imperfectly with a cloudy heaven, at even-

ing, and by lamplight, we found the retina covered round about the *papilla*, here and there, with black specks; the *papilla* itself likewise contained several dark specks, but appearing less black, and less accurately circumscribed. Otherwise nothing abnormal. The supposition that here a pigment-transudation had taken place, sufficiently explains the perfectly normal perceptibility of the patient existing only in an intense light.

In conclusion, I will make mention of one other case, in which the speculum showed us, with tolerable certainty, that a lesion of the optic nerve itself was the cause of the blindness.

F. S., 11 years of age, with brown hair, brown-yellow iris, and very dilated pupils, was born amaurotic in the left eye; the right eye normal. The left ocular globe is a little smaller than the right, and sits deeper in the orbit. The *papilla nervi optici* appears as an unusually small elliptic disk whose lesser horizontal diameter is about half as large as the great perpendicular diameter; the *arteria* and *vena centralis* give off as usual two branches, but very fine, and besides the branchlet passing inwards, a second is also here visible running outwards; the *macula lutea* and the rest of the background of the eye present nothing abnormal. By means of a concave lens, No. 3, we discovered a central punctiform opacity of the lens. The right *papilla* is circular and quite large. While here, on the one hand, the circumstance that the amaurosis of the left eye was congenital, and on the other the obstructed development of the bulb warranted us in concluding upon an analogous condition of the optic nerve, so also the examination with the speculum confirmed this diagnosis.

Sanguinous distention of the choroidal vessels is a very frequent phenomenon, which is characterized by abnormal size and intensive dark color of the choroidal veins. We have also observed, in many cases, genuine choroiditis with secretion of the exudation mass. When the exudation is deposited in small circumscribed spots, the background of the eye appears uneven, and reflects the light from those spots stronger than from others; if the exudation has a greater extent, the retina becomes mostly separated, as it were, at the point of entrance of the optic nerve, and projects like a large eminence, whilst it crowds the *corpus vitreum* out of its position; such an eye has then lost the normal relation of internal parts, and the vessels coursing upon the hill-like tumor may be seen by mere illumination from the mirror without the application of a concave lens. Since such extensive exudations are mostly serous, of a fluid nature, so the retina, together with the vessels, may be seen floating after a movement of the globe. Ruptures of the retina from exudations crowding upon it from behind, in consequence of which it floats about freely in the exudation and disorganized vitreous body, we have not observed. In one case of choroiditis, which had had its seat more in the region of the *ova serrata*, we found the following. If we

looked through a convex glass, No. 6, in the direction of the axis of the eye, the pupil being nearly normally illuminated, a dark body appeared at the lower border of the papilla, which was bounded above by three convexities, and floated hither and thither upon motion of the bulb, without leaving the border of the iris; simultaneously there appeared several other dark dentations, also black coagula-like corpuscles floating free. If we looked inward, the eye being directed inferiorly, we saw behind this dark body a yellowish green exudation mass projecting inwards deep into the eye, which formed several strata lying behind one another, representing mountains as viewed from a distance. Through a concave lens we beheld, in the very depth of the eye, other well-defined black specks; but the vessels were seen only very imperfectly with the eye directed strongly upwards. The exudation, in this case, penetrated the vitreous body.

If we now review the truly surprising results which the *speculum oculi* has furnished us in so short a time, we can not only concur in the expectation cherished by the highly esteemed inventor, that all the alterations of the transparent media, the retina, and choroidea, found in the corpse, will also be recognised in the living eye; but also assert, with safety, that it will be possible for us now to pursue with exactitude the progressive development of the pathological processes of these structures, as well as their recession, whether effected by nature or not.

The advantages which will be derived by the practising physician, irrespective of the cure of these diseases, we have not hitherto considered; but one thing is certain, that an exact knowledge of the diseased objects must be the basis of a rational therapia: without this knowledge we grope in the dark. We shall not be able to cure all diseases, even in this manner; but the physician gains a great advantage thereby, when, from his knowledge of their incurability, he holds himself aloof from fruitless, perhaps injurious, attempts to cure.

PART IV.—HOSPITAL RECORDS.

REPORTS.

The writer of this department claimed the privilege, in the last issue of the MONTHLY, of commenting upon a passage in the article which appeared in No. 3, entitled "Dr. March and his Reviewer," over the signature of Louis Bäuer, M. D., &c. The passage referred to is as follows: "I never heard of any cure having been consummated in this way, until I happened

to read No. 1 of the A. M. Monthly. It is stated therein (vide Hospital Records) that by encouraging the movements of the affected limb, Dr. Carnochan had succeeded in removing the deformity, and restoring the utility of the limb. Incomprehensible as these startling results appear to a surgeon who has acquired some experience on the subject, nevertheless—'Brutus says it, and Brutus is an honorable man.'"

There are several points covertly made in this sentence, which, for its purpose, is admirably constructed, and renders superfluous the apologetic strain of humility with which Dr. Bäuer affects to put forth his literary crusade in a language foreign to him. It is intended, firstly, to imply that the writer of the Hospital Report was ignorant of the subject of which he was treating.

Secondly, to deny and disparage Dr. Carnochan's success in the treatment of morbus coxarius.

Thirdly, to imply misrepresentation as to matter of fact; and,

Fourthly, to ridicule the whole statement as opposed to his (Dr. Bäuer's) peculiar views on the pathology and great experience in the treatment of this particular form of disease. With the first, third, and fourth points, it is my present purpose to deal; and of these only is it necessary, or would it be decorous, that I should treat. The second involves a matter of wide range and great importance in a practical point of view; but, inasmuch as it bears principally on a third party, who is perfectly competent to fight his own battles, and who would most probably neither desire nor encourage any advocacy, were I disposed or competent to attempt it, I can, very consistently, and most undoubtedly will, leave him to select his own time and manner of reply.

Disliking extremely, and wishing to avoid the empirical method of "blowing one's own trumpet," I shall pass over, with brief comment, the first point. It will suffice to say that a careful perusal of the principal standard surgical works, of a fair proportion of the special literature of the subject, many frequent opportunities of witnessing the treatment adopted by various practitioners, and the professional care of a few cases during a practice of nearly twenty years, would seem to justify the expression of an opinion on the phenomena presented by patients under treatment, wherever seen.

With reference to the third point, I shall be less scrupulous.

In the performance of my duty, as the contributor of the Hospital Reports to the pages of this periodical, it is my aim and strong desire faithfully to describe every thing which I see, and chronicle all that I hear, which, in my humble judgment, appears to possess sufficient interest for the professional reader and the practitioner. In accomplishing this aim, and in fulfilling this desire, I exercise, to the best of my ability, my powers of

observation and the faculty of memory. Sharing largely in the fallibility of human nature, it is possible, and very probable, that I may err in judgment as to the value of a particular fact observed or heard in relation, and so may sometimes give place to cases which to other minds will appear indifferent and unimportant. It may even occur that I shall omit to record some circumstance or statement, through inadvertence or lapse of memory, which would be valuable. But of this the readers of the MONTHLY may rest assured, that whatever I do relate shall be a true and correct report of what I have either personally witnessed or heard related. And that when I venture upon an opinion, it will be the result of conviction in my own mind, and not the retailed views of another.

It appears from a foot-note by the Editor, attached to the quoted statement, viz.: that Dr. Carnochan "encouraged motion of the affected limb," that, at the time the report appeared, Dr. Carnochan objected to this assertion, as not conveying a correct impression of his mode of treatment. The explanation given being, Dr. C. "allows," *i. e.*: that he does not object to, but that he does not encourage motion. I regret that I should have failed to apprehend sufficiently this nice distinction, and I must acknowledge, that I do not as yet fully appreciate its force. In justification of the conclusion at which I arrived, I will state the premises on which I reasoned that encouragement was given to the movement. Fortunately, these premises are not hypothetical. On visiting the wards of the Hospital in which the patients are, on more than one occasion, they were requested to walk across the floor. In some, it is true, this was done to exhibit the perfection of the cure; but in others, at different stages of the progress of the disease, to prove the absence of all restraint to the movement of the joint. I do not consider, however, that this misapprehension, if such it really be on my part, affects the general principle of Dr. Carnochan's mode of treatment, nor does it detract from the accuracy of the report, as regards the result—the main point, after all. Let me try if I can be more successful in reporting accurately what I witnessed in Dr. Bäuer's Institution, on the only occasion on which I have had the opportunity of seeing the patients under treatment in his wards.

I will premise that I concur, in many points, with the views entertained by some of those authors from whom Dr. Bäuer has formed his own theory on the pathology of this disease, but on points of practice, as laid down by them, and adopted and insisted on by him, I differ essentially. There is no doubt that he has taken great pains to render himself intimately familiar with the literature of the subject, and has given much attention to this speciality of practice. To reason upon, theorize, and put in force his therapeutic and operative surgery, he is well qualified—but this does not make him right. Of his measure of success I have no means of determining.

There were, at the time of my visit, only two patients in the house. Both young, I should think under eight years of age. One, a boy, was lying on his back, with the head and shoulders considerably below the level of the hips, which were placed on an elevated padding of some description. To the best of my recollection, the left hip was the affected one, and that extremity, bent over this saddle, so to speak, was evidently forcibly extended, and kept so by an arrangement of straps and adjusting screws, or rack-work. In this position the little sufferer had been kept for some two or three days previously. The leg was œdematous; the outline of the extended muscles on the anterior aspect of the thigh, the dark tracing of the integumental and subcutaneous veins were evidences of the mechanical force exerted to maintain this position of the limb. The whole attitude of the body was one indicative of irksome constraint, to me, at least, painful to witness. The pale transparent skin, the feverish flush on the cheek, the saddened expression of features, and the mournful, wistful gaze of the eye, created an impression little calculated to induce a preference of this mode of treatment.

The other patient, a little girl, was lying on the bed on the chest and abdomen, her face directed towards some toys placed for her amusement, an expression of grateful relief in marked contrast to the boy's. Treatment had been successful with her, I was informed, in restoring the length and normal position of the limb; she was then undergoing treatment by poultices on the sacral region, for a boil, as I understood.

It is but right to state that my visit was paid shortly after the commencement of the doctor's institution, and therefore the limited opportunity for observation afforded. But, judging by the appearance of this case, I frankly confess that my objection to, or it may possibly be prejudice against, the treatment, by extension and counter-extension previously existing, was fully confirmed. I will not presume to say that it is unwarrantable, or even unscientific, but it certainly appears objectionable to submit a delicate frame to such restraint when other means are found to answer an equally efficient purpose at a less cost to the constitutional powers, even if this be but temporary.

Let the reader of Dr. Bäuer's caustic article, in which he so recklessly assails an unoffending reporter, consider well the force of his prefatory exordium on the qualities of criticism and the duties of a reviewer, and, judging the remainder of that production by the standard of perfection and excellence there established, pronounce whether he has abided by the rules laid down. Alas! poor human nature; why is it that, with all the accumulated experience of centuries to guide us, the daily recurrence of glaring examples to warn us, the advantage of a familiar knowledge of the broad distinction between them, and the freedom of choice, we are constantly falling away from what is right, and wilfully wandering into the fields of error—of wrong. Stick

to your principles, Doctor; you will have enough to do to maintain those, when fairly engaged in the controversy you seek to provoke. And who is he, may fairly be asked, who assumes* to decide thus peremptorily on the merits of this or that course of practice. A "surgeon, of some experience," I may be prepared to admit; an earnest seeker after scientific truth and knowledge, I will believe; but what has Dr. Bäuer done to justify a classification of his own with names like those of Petit, Boyer, Larrey, and Brodie. Beyond one or two contributions to a contemporary periodical on his favorite subject, and the issue of an expository pamphlet with reference to his private institution in Brooklyn, we know of nothing which entitles him to the rank of an authority in general or even special surgery.

The egotism of a writer, if not very skilfully managed, will always act as a hazy mist, dimming the lustre of his genius and detracting from the value of his labors. In the present instance, the evil of failure in this management is but too apparent. The gratuitous defence of Dr. March, the unjustifiable assault on Dr. Carnochan, the heedless, unfair, and uncalled for attack on the writer, the self-established association of names,† and the prominence given to the B. O. I., all tend to induce the conviction that the lust of notoriety may be as strong as the love of science. This reply to the doctor's fierce attack may possibly contribute to the end in view; but, despite such a result, I felt it due to myself to parry the thrust, and only hope that the readers of the MONTHLY will excuse the prominence given to the subject.

There really has been comparatively little of interest in the practice of the last month, calling for comment. But, in the mortuary returns of the city, the number of deaths occurring from croup during the two last weeks of March, and the first two of April, is somewhat remarkable. The average exceeds that of former years considerably, and it would be a fruitful topic of investigation to inquire into the causes operating to produce this increase. Of recent years, much light has been thrown on the pathology of croup, and the treatment has undergone many modifications in accordance with our improved knowledge. Much prejudice still exists against the method proposed and successfully practiced by Dr. Greene, of applying the caustic solution to the internal surface of the larynx and trachea; but evidence of its utility daily multiplies, and we are convinced that ere long it will supersede the operation of tracheotomy, and displace entirely much of the exhaustive constitutional treatment hitherto regarded as essential to the cure.

* As this is a word apparently most repugnant to the Doctor, I venture to explain it as meaning in this connection, "who, of his own accord, takes upon himself."

† Vide page 191, "Bonnet, Lorinser, Buehring, March, myself, and others," page 195, "Bonnet, Buehring, Lorinser, Malgaigne, myself, and others."

PART V.—EDITORIAL AND MISCELLANEOUS.

THE STUDY OF ANATOMY.—By a postscript appended to the April number of the MONTHLY, we announced to our readers that the bill legalizing dissections had passed the Legislature of the State. It has since been signed by the Governor, and has become a law of the Commonwealth.

No law could be passed, we are sure, which would afford to the whole profession of the State so profound gratification, or which could be more justly felt to be that which every sentiment demands. Its necessity is apparent from the almost universal demand made for it by the whole body of physicians, and the general effort made in favor of the bill by those in different parts of the State. We may say, without impropriety, that the MONTHLY contributed its full share to these efforts; and we have some reason to believe that the republication of Macaulay's able argument upon the subject in our pages was both seasonable and influential. This same speech, by the by, we would commend to the perusal of gentlemen of learned societies, before they attempt to put in a claim for New York as the pioneer in this humane enactment.

This much we should not have said, chiefly for want of a fitting opportunity, had not our attention been particularly called to the matter by two papers, emanating from two entirely different sources, but both characterized by so much that is erroneous and injurious, that we are not at liberty to pass them by. The first is of consequence from the high position of its author, and the popular magazine in which it appears; the second from its having emanated from certain gentlemen in the profession.

To speak of them, then, in succession: the former appeared in the April number of Harper's Magazine, under the heading "Editor's Table," the title of the article being "The Sacredness of the Human Body." It is understood that the article was written by Professor Tayler Lewis, LL. D., a gentleman whose name is familiar not only in discussions of the Platonic Theology, but in many other departments of science and literature. It is hardly necessary to be said that his name carries with it a great weight of authority; and though one may with diffidence oppose so far-famed a knight, yet the double arming of truth and right gives irresistible strength.

There seems to have been a double incitement for Professor Lewis' article—the one the threatened invasion of Trinity Churchyard in this city, by the construction of a street through a thousand graves; the other, the application for the passage of the Anatomy Bill,—or, to use his own words, "the claim of science and the claim of the mart." The learned writer, therefore, commences his dissertation by stating some allowed truisms con-

cerning the respect which in all ages, and among all nations, has been felt for the remains of the deceased, and puts the question whether or not this is a prejudice and superstition, or is grounded in reason as well as in the purest moral and religious sentiments. He then continues—

“The sacrilegious tendency of which we speak, shows itself in two ways. There is the claim of science, and the claim of the mart. The doctor and the merchant both demand that ‘the earth shall give up to them her dead.’ One wants the bodies themselves; the other, the room they occupy. One presents the plea of useful knowledge, the other of increasing trade which must have its accommodation. One would extract the elixir of life and health from mortality; the other would create the philosopher’s stone from dust and ashes; it would bring out of dead men’s bones that charm of the alchemist which shall convert the vaults of the church-yard into the vaults of the bank, and the moss-grown, mouldering monuments into the bright gold of an advancing commerce. It must be confessed, however, that there is no little inconsistency in the respective attitudes of the two parties so clamorous for a similar object. Some have not hesitated to advocate the claim of the doctors, and to talk of the necessities of science, who have been horrified at the thought that the sacrilegious foot of trade should disturb the bones of their ancestors. The hospital, the almshouse, and the prison, may thus be invaded for the secular good of humanity, but Trinity ground is sacred. There are higher associations there. The church, too, comes to the rescue, and nobly must we say has she fulfilled her duty in the case.” * * * * * “The church is in the right. We praise her pious zeal. Every other Christian church, or denomination, in the land ought to make common cause with her. Yet still, must we say it, the other invasion of the dead is no less sacrilegious, while it makes even a deeper appeal to our human sympathies.”

Such a pitiful begging of the question is not worthy of so learned a man. About to show, as he believes, that all interference with the bodies of the dead is contrary to instinct and revelation, he commences by asserting it to be sacrilegious. Then, too, he proceeds to conjure up all those feelings which, however natural they may be, are not the arguments of the logician.

He then continues—

“We can not help thinking that the necessities of medical science have been greatly overrated. Even where the want is conceded, the benefits may be purchased too dear. Better that the causes of some bodily diseases remain concealed, than that the knowledge of them be obtained at the sacrifice of some of the best feelings of the soul. But, admitting the force of every plea, may we not ask—is there not in many cases, in most cases, perhaps, an unfeeling waste?” * * * * * “We would be cautious here in treating of a matter which, it may be said, the writer does not professionally understand; but, must it not strike almost every unprofessional mind in the same light? Why this apparently enormous waste? Why must the human body be dissected over and over again ten thousand times, not so much for the discovery of new truths—for that is not even alleged as the ground in most cases—but to explain old and well-known truths to

every new class of students? May there not be made most accurate anatomical representations by means of drawings, by preparations in wax, and other modes that might be mentioned, reserving dissections for those cases alone where the parts are too minute and the action too microscopical to be set forth by any such methods? Can not a knowledge of the general anatomy be given unless a man is cut up every time the class comes before the lecturer? These questions may perhaps betray ignorance of the subject in some respects, but of the ordinary workings of human nature all intelligent men are alike judges, and upon the minds of such the conviction will press itself, that the hardening effect of these scientific butcheries—we mean to use the term in no more offensive sense than if we were applying it to the worthy citizens who supply us with animal food—must produce an indifference, a recklessness, which not only leads to the waste of which complaint is made, but actually comes to believe it indispensable! The right feeling on this subject might, perhaps, obtain results equally scientific, and equally valuable, from far less means, and with far less sacrifice of what is of more value than almost any amount of knowledge, whether speculative or practical.”

We have thus quoted freely as much as our limits will allow, in order that we may not be thought to misrepresent the style and manner of Prof. Lewis' argument. We may here add that the whole is in the same strain.

In the first place, we say, deliberately, that these questions do certainly “betray ignorance of the subject in some respects;” and though this is surprising in a man who claims to be educated, it becomes highly *culpable* in one who sets himself forward to teach the people. Were his views called for and their utterance insisted upon, it would be different; but he has selected this from the thousand topics fitted for a popular journal, and has entered upon its discussion uninformed and ignorant. Would Professor Lewis consider a person, who confesses his ignorance of the philosophy of Plato, fitted to thrust himself forward to instruct the people upon its claims and its teachings?

What are the *facts* upon this subject, and what are the necessities for continual dissections? To state them briefly, they are, that there is continual occasion for the performance of surgical operations that life may be saved; that these operations may be required at the hands of any member of the medical profession without a moment's notice, and without a moment's opportunity to consult books or friends; that the knowledge requisite for their performance cannot be obtained from books, or plates, or preparations, or models, and is only to be acquired by each individual, who is an applicant to be admitted to the medical profession, first obtaining it for himself; that by means of the information thus derived, as one of the essential requisites, the average duration of human life in civilized countries has been materially lengthened, while diseases before incurable are found to yield to the deductions of scientific observation.

To illustrate each of these statements would be easy ; but our space does not permit it.

But, says Professor Lewis, "even when the want is conceded, the benefits may be purchased too dear. Better that the causes of some bodily diseases remain concealed, than that knowledge of them be obtained at the sacrifice of some of the best feelings of the soul." Admit, for a moment, both these propositions, and it is not at all clear that *now* either the benefits are purchased too dear, or that this *sacrifice* is made. In fact, quite the reverse is true ; and still a popular writer, not possessing especial knowledge upon the subject, indirectly asserts this to be the case.

The remainder of our writer's argument, if we may apply the word to a production in which there is neither reason nor logic, is as follows. Though dissections do no hurt to the dead, they do an immense injury to the living.

"Every thing, therefore, is unchristian, as well irreligious and demoralizing, which goes to destroy any feeling or association of ideas so vitally connected with this great truth of revelation (the resurrection of the body). The air of the dissecting room is unfavorable to it ; not that the superficial scalpel of the surgeon could ever penetrate the psychological and physiological mystery that lies so far beneath, and thus show the falsity of the common belief ; but the outward appearances, the outward, material, tangible associations, are hostile to the scriptural view."

Of this position we simply say it is incorrect in its premises, false in its facts, and unsound in its deductions. Still, of this the writer says, "and this is the point we wish mainly to present."

"Now what a contrast to all this religious feeling, so tender, so melancholy, and yet so full of moral health to the soul—what a contrast, we say, to these blessed influences that come to us from the grave in connection with the doctrine of the resurrection, is presented by the scenes and associations of a dissecting room—the sacred human body, the once loved form, the former temple of a loving spirit, thus lying mangled, debased, deformed, made the subject of unfeeling remark by some cold, materializing lecturer, and exposed to the rude gaze and ruder hands of hardened, and, it may be, licentious students."

Cold, materializing lecturer ! Licentious students ! By what authority does Professor Lewis thus calumniously speak ? But we will refer to this again.

Our author then proceeds to speak of the necessity for postmortem examinations, and that friends willingly consent to them, if the breach is so closed that the body again presents "that appearance of entirety which the conceptive faculty demands when we would think of the state of the dead." He then asserts that such a spirit does not pervade the dissecting room, which, if it did, would, he thinks, render that less objectionable.

Repeating, then, the stale objection to the appropriation of the bodies of those who are without relatives or friends, and which Macaulay has so thoroughly answered, he closes the portion of his paper which concerns us thus :—

“The medical profession, it is said, must have subjects. If so, let them be content with the fewest possible; let the most serious wisdom among us be exercised in providing the means with the least sacrifice of feeling, the least of moral detriment; and then let the necessary duty be ever discharged with all the devout reverence of a high and religious trust.”

Precisely; and it is simply because the medical profession have been endeavoring to accomplish this very thing, that this tirade has been poured out upon them.

The Anatomy Bill was proposed, has been urged, and is now accepted as a law for these reasons. However Professor Lewis may *think*, the members of the medical profession *know* that there is greater good to be done, not only to the bodies but, indirectly, to the souls of men, by the prolongation of human life resulting from increased and thorough knowledge of anatomy, than by the anxious preservation of that “*appearance of entirety* which the conceptive faculty demands.” For years they have obtained this knowledge, though unaided and opposed by ignorant law makers, and have conferred the boon of prolonged life upon rich and poor by themselves incurring the greatest risks.

Having found that, by a law appropriating to their use the bodies of a class who are without friends to suffer pain in consequence of their use, the science would be pursued “with the least sacrifice of feeling and the least of moral detriment,” they have proposed and obtained, in a few States, such an enactment. And in this they were right. The law was not desired that *more* subjects might be had, but that they might be obtained legally, and that this necessary pursuit might not bring with it the risk of ignominious punishment.

But we cannot dwell longer upon this.

A subject, forced upon us by the spirit of Professor Lewis’ article, must, however, occupy a little space. That so learned a man as he has repeated the stale slanders against our noble profession which are found in this article, is a painful thought. Neither are these things very uncommon among educated men. We could endure it from those who are not familiar with literature and history; but when Professor Lewis accuses the whole medical profession, as he has done, of materialism and scepticism; when the learned Dr. Cogswell, of the Astor Library, takes occasion to go out of his way, in describing that institution, to sneer at medical men for not working without a fee, when no class of men render so much service gratuitously, it is time that we repelled the charges publicly.

Professor Lewis asserts that the air of the dissecting room is unfavorable to a belief in the doctrine of the resurrection. The argument which would be necessary to render the error of this statement palpable, is simple, but for its illustration we must occupy more space than is at our command. We are compelled, therefore, to be content with asserting (and our assertion should be as authoritative as that of Professor Lewis) that there is no class of educated men who are, as a body, more sincere, firm, and intelligent believers in this great doctrine, than physicians. They, at least, understand that, when they say "I believe in the resurrection of the body," they do so because it is the teaching of the Scriptures, and not that of any human master. "With what body do they come," is not *their* question. It is in the sectarian class room, not in the anatomical theatre, that this inquiry is mooted. The man who studies by dissection the structure of the human body, too often meets evidences of design not to ask who is their designer—and too often meets ultimate facts beyond which he cannot go, not to learn to submit his reason to the confession that there are many things beyond it. In Professor Lewis' own words, "Fathers, and schoolmen, as well as modern metaphysicians, have filled volumes with arguments in respect to what constitutes bodily identity. Yet still—faith clings to the dogma and will not let it go." And no one's faith clings more closely, and less doubtfully, than that of the members of the medical profession.

It is not any more correct that we are materialists. Though we cannot discuss this topic, we will add that we can conceive of no better remedy for the mind folded in the cold, heartless embrace of materialism, than to pursue *thoroughly* the study of anatomy.

We do not claim that of our profession (we do not include in its ranks the half-educated and cheating empiric) all the members are free from scepticism and error. But what we do assert is, that they have not had, neither do they now have occasion to fear comparison, in these respects, with any class of the community; and therefore the jibes and sneers, so freely bestowed upon us by other educated men, are as undeserved as they are unkind. When men, as cultivated, as pure, as refined, as wise as any, claim that, for the study of their science and the good of the public health and morals, there is need of the study of anatomy, and point out the best way, in their opinion, for accomplishing it, it is neither in accordance with sound logic nor Christian principle for men of education and influence to point the long finger of scorn at them, and stir up the less-thinking populace by the cry of Ghouls, Vampires, and Infidels.

The second paper to which we referred in the commencement of this article is, a remonstrance sent to the Legislature of the State of Massachusetts, by a committee of the Faculty of the Massachusetts Medical College, against the application of the Boylston School, in Boston, for power to con-

fer degrees. To this application allusion has been made by our Boston correspondent, in his letter which we publish this month, and the merits of the case have been fairly stated by him. This remonstrance is, on the whole, a precious document, and we confess to having had a good amount of amusement over it. We cannot give it entire, but quote in succession some marginal notes, indicative of the intended force of the paragraphs against which they are set.

"Medical schools are of two kinds; 1 private, 2 colleges." We presume this discovery will be at once admitted to be true.

"Boylston, a private school. Tremont school larger." The Tremont school is taught by the Faculty of the Massachusetts Medical College, so that they are very disinterested parties in speaking of it.

"A new school is not wanted. Already eight." It is not very remarkable that the committee should suppose the first proposition to be correct, though the general opinion of the profession is hardly in accordance with it. The *eight* schools are those of New England, of which the committee say that they are "almost all in a languishing state." If connected with one of them we should request the committee to speak for themselves.

"Mass. Medical College, a *State* institution, well provided with means of instruction." The *text* dwells upon the value of the *apparatus* belonging to the school, and asserts that the incorporation of new schools "tends to entice students from places where they are well taught to places where they are liable to be worse taught." Rather modest, in this connection—but if our correspondent is correct, and we incline to think he is, students in Boston would not at all stand in this danger if the Boylston school is chartered.

"Now more physicians than the public need." If the committee think so they had better shut up their school.

"There are not anatomical subjects enough. Dangers." In the opposite paragraph the committee say, "In New York and Philadelphia, hundreds of bodies are every year stolen from their places of burial. In this commonwealth, the same violation of graves was notoriously carried on, until the passage by the Legislature of what is commonly called the *Anatomy Law*." This is a rather *cool* statement, to say the least, for men to make who are no more willing than other physicians to do without anatomical material in teaching students; and are quite *as* unscrupulous as are the teachers of New York and Philadelphia about stealing bodies. But it appears to be still *cooler* when it is known that they readily seek the aid of resurrectionists in this State to supply their deficiency, and are only too much provoked when from any reason they are disappointed in obtaining their supply. We really do hope that these virtuous gentlemen will not find their pure robes soiled by the contact of the brethren of

New York or Philadelphia. The "Dangers" are, in reality, that the committee fear a scanty supply of students, professedly they fear a still more scanty supply of subjects—and that this "will act as a premium on the illegal getting of subjects which is now unknown (?) in this city and State." We again salute this spotless virtue. The last marginal note is, "if this is chartered others must be so," which would of course tend still farther to injure the committee's institution. "This has not been the previous policy of the Legislature." Therefore it should not be changed.

But now, putting jesting aside, we ask if it is worthy of men who are prominent in New England, as teachers in our profession, thus to appeal to popular prejudice against the study of anatomy, in order to influence a legislative body against conferring a charter upon a rival institution to be conducted by gentlemen every way as honorable and as capable as themselves. It must not be surprising to this committee if, for any reason, a popular tumult should be excited against themselves or their institution, to be compelled to meet their own words and arguments. To accomplish their own immediate purposes they have assaulted their brethren, and, though assaults from strangers are not unexpected, this selfish treachery at home is shameful.

What the result of this application is, we have not definitely learned—but, for our own part, cordially hope it may be successful. Neither do we know the comparative strength of the parties—save from one indication, namely; that the medical periodical published in Boston has not spoken of the matter, from which we judge that they are nearly equal. When this takes a part we shall know who is strongest.

FROM OUR BOSTON CORRESPONDENT.

Massachusetts Medical College. Boylston School: Catalogue of the Hospital. Three cases of Hydrophobia.

Our quiet city has furnished even less than its usual quota of medical items during the past winter. At the Massachusetts Medical College the number of students has not exceeded the average of about one hundred; twenty degrees were conferred at the close of the term in March, with a less number to be conferred at the annual commencement of Harvard College in August.

Considerable discussion has been excited by the application of the Boylston Medical School, for permission from the legislature to grant the degree of doctor of medicine. Dr. Winslow Lewis, whose name stands at the head of the School, has long been known to the profession in New England, as

among the most skillful and experienced of its surgeons. Other members of the school have been distinguished among us, for their long and successful practice of their respective branches, and the thorough and faithful discharge of public professional offices in the city, or else as young men whose professional education, in the best schools of our own country and in Europe, is a guarantee of their ability for the post of Professor. If successful in their petition, they propose to make important modifications in the arrangement of lectures and recitations, after the model of the French and German schools, by extending the term through the year, and giving to each student a systematic course of instruction for the three years of study. As a guaranty for their standard of instruction, they propose to submit their graduating classes to the examination and judgment of a committee of the State Medical Society, instead of the Professors themselves, in this way avoiding the much-dreaded depreciation in medical education. Any one who is at all familiar with the wants and peculiarities of medical students must, it seems, have felt the necessity of some change in the manner of medical instruction, so far inferior among us to the standard in other countries. And the feeling among physicians here is decidedly in favor of the petitioners; that, if they are willing to take upon themselves such an arduous duty in the face of the prestige of Harvard University, they deserve the best wishes of the Profession.

The Trustees of the Massachusetts Gen. Hospital lately ordered a complete catalogue *raisonné* to be made of all the surgical cases which have been treated in that institution since its establishment. A daily record has always been kept of each surgical visit, and afterwards copied into a volume. These have been accumulating for a large number of years, embodying an invaluable amount of clinical observation, but of little use to the student on account of the diffusion of each particular class of cases through a large number of volumes. The catalogue is written in the largest-size folio volumes; the diseases are arranged and subdivided in alphabetical order; the page is ruled perpendicularly into spaces specifying the name of the surgeon in attendance, the kind of ether given when anæsthetic agents were used, the age and sex of the patients, the disease, general course of treatment or operation, the duration of the case, the result, and the volume and page of the general records in which the minute daily details of the case are given. These records extend through a period of thirty-three years, in one of the largest hospitals in the country; every case has been observed by men whose names are a sufficient voucher for the correctness of any diagnosis or the success of any operation. The value of this long series of clinical observations, so carefully classified, can hardly be estimated.

Within a few months three well-marked and carefully observed cases of hydrophobia have occurred in our immediate vicinity, affording an oppor-

tunity for direct comparison of the progress and symptoms of that rare disease, which is not often met with. The first case is reported in the Boston Medical and Surgical Journal, by Dr. Geo. Hayward. The subject was a lad, seven years old, who was bitten in the month of August, 1853. The principal wound was on the upper eye-lid. There was another, more superficial, near the angle of the mouth on the opposite side. One hour afterward, the wounds were sucked by the attending physician for two hours (the position of the principal wound rendering excision or cupping impossible). They were afterwards thoroughly cauterized with nitrate of silver; the wounds healed kindly, and the lad appeared in perfect health for a month, with the exception of some sensitiveness to cold, which, however, was not noticed at the time. Monday, Sept. 12th, thirty days after the accident, he passed a restless, uneasy night, complaining of his stomach. Tuesday morning he had no appetite, said he was thirsty and wanted water, when it was brought toward him he seemed agitated; when carried nearer he was slightly convulsed; and on approaching it to his lips he cried out in great terror. He complained at that time of pain in the eye where he was bitten, but there was neither redness, swelling, nor tenderness about the cicatrix; he was unable to swallow medicine; was very sensitive to currents of cold air; the skin was hot and dry; pulse rapid; respiration hurried, and the mouth was filled with frothy saliva. After a sleepless night, on Wednesday the symptoms assumed a graver character; he walked about the room in a wild, impatient way, carrying his head on one side; seemed much disturbed by the entrance of visitors; when asked what was the matter, he placed his hand on his throat and said he could not swallow. His respiration was hurried so much as to interrupt utterance at almost every word; a full respiration was followed almost always by a violent convulsion. Giving him a small piece of bread, he put it in his mouth, but was unable to swallow it, though making the strongest efforts to do so; the pulse was 120, and the respirations more than 40 in the minute. On Thursday, the third day, partial hemiplegia supervened, his speech became indistinct, but as long as it was intelligible he appeared perfectly rational; he died about 11 o'clock that night; no active treatment was resorted to.

The second case was reported by Dr. John D. Homans to the Society for Medical Improvement. The patient was a boy, fifteen years of age, who was bitten Jan. 27th, 1854, in the right ear and the calf of the leg; the wounds were washed with laudanum and water, and healed without trouble. He seemed in usual health, except a slight elation of spirits, until Sunday morning, Feb. 25th, twenty-nine days after the accident, when he was observed to shiver, and said "there was a catch in his breath every few minutes." In the course of the day he became unable to swallow liquids without great suffering. He slept little during the night, and on Monday

was found in bed, with hot, dry skin, furred tongue, eyes wide open, with a vacant expression, pulse 80–100, irregular and intermittent. Touching him suddenly or speaking quickly to him produced a shuddering of the whole frame, with muscular spasm. He was not inclined to converse. There was great thirst, though he had not been able to swallow any thing for eighteen hours, from the spasm of the throat. The skin was bathed with an acid, offensive perspiration. By approaching the mouth gradually with the teaspoon, waiting till the spasm produced by the sight of the fluid was over, and then turning the contents quickly into the mouth, he was able, with great difficulty, to swallow a small amount of liquid. These symptoms increased rapidly in severity during the day and evening. On Tuesday morning, at one o'clock, the administration of ether and chloroform was attempted; but the approach of the sponge or napkin occasioned such violent convulsions that the attempt was given up; spitting of thin mucus began at this time, and continued to increase till his death. Tinct. opii, in doses from 30gtt. to 3 i. was given until seven A. M. He had two intervals of sleep in the time, awaking after each with sense of suffocation. At one time his pulse became very rapid and feeble, the face was collapsed, he seemed perfectly quiet, and said he was going to die: soon after, the pulse rallied, and the spasms returned with increased violence. The perspiration, particularly about the face and neck, became very profuse, the application of a napkin produced severe convulsions. The sense of hearing seemed much exalted—he complained of the singing of a small spirit lamp, referring the sound to his own throat. The mind seemed perfectly clear, though easily irritated: he exclaimed frequently, "Oh dear! I wish I wasn't so fidgety," and to the time of his death expressing great anxiety that the fears of his mother should not be excited. At nine A. M. there was an interval of calm; the spasms were very slight, he took warm drinks from a spoon with slight effort; cold water seemed, however, to occasion great distress. Pulse 120, skin warm and moist, tongue clean. In half an hour, the symptoms became more aggravated than ever, and continued without cessation till his death. He complained much of his throat, saying there was something, rolled up like a cigar, sticking in it, which he was constantly trying to spit out; the convulsions soon became frightfully violent, until two, P. M., when, though nearly pulseless, it was decided to administer chloroform. He died at half-past two, while under the influence of this agent. The following day, at ten A. M., an autopsy was made. Decomposition had already commenced on the chest and abdomen: the body had a very offensive odour of putrefaction. The cicatrices of the wounds were somewhat bluish, with some induration of skin around them. The substance of brain and spinal chord was much softened; the distinction between gray and white cerebral matter was very strongly marked. A careful examina-

tion of other organs of the body revealed nothing calculated to throw light upon the nature of the disease.

The third case occurred at the Mass. Gen. Hospital, in the service of Dr. Cabot. The patient was a girl seven years old. She was bitten in the country, Dec. 18, 1853, and was brought to the Hospital immediately—she was seen nine hours after the accident, and found to have three wounds near the elbow, one on the palm of the hand and one on the forehead: they were thoroughly cauterized with nitrate of silver. The next day ether was administered, and the wound excised, and cauterized with nitric acid: they healed without trouble, and the patient was discharged Dec. 13th. She was re-admitted, Jan. 20th. After leaving Hospital, had appeared unusually timid, but in other respects in usual health. The first convulsion occurred the morning of her re-admission, at breakfast, when she suddenly dropped her tumbler of water and complained of inability to swallow. Since which time she has had spasms, lasting for half a minute, like catching the breath in a cold shower bath, a current of air, ray of light, sound of running liquid, or mention of them, will bring on a paroxysm. She is unable to swallow, and afraid of every one: cicatrices of wounds more red than when discharged from Hospital. A large blister was applied to the back of the neck, with rubefacient lotions to lower extremities. She slept but little the first night, but was more calm the day following, ate a piece of ice, drank some water—in the evening grew more restless, was unable to stay in bed, says she shall die to-night, spits a good deal of brownish saliva, says there is vinegar in her stomach; skin dry, tongue red, pulse frequent. Hydrocyanic acid was given, without any effect upon the spasms, which increased in rapidity and severity. She was put under the influence of ether, and its use was continued till death, Jan. 22d. At the autopsy, the brain was rather livid, the gray portion much darker than usual; nothing remarkable was found in any of the other organs.

These cases, the leading features of which have been presented, afford an ample field for professional speculation, with regard both to the nature of the malady and its treatment. The latter consideration would probably vary very much according to the heroic or expectant tendencies of each practitioner, and his confidence in the efficacy of remedies. The former, notwithstanding the great consideration which has been bestowed upon it, is still involved in obscurity. In the cases cited, two of the dogs are known to have bitten others of their species, producing, in each case, hydrophobia. In the first case—a man and boy were bitten, the first cauterized the wound freely, to the second nothing was done—neither has yet exhibited any sign of the disease. The first and last patients had their wounds thoroughly cauterized—while to the second nothing was done—yet there was no difference in the development or termination of the malady. That

hydrophobia is produced in the human race by the absorption of virus, from a rabid animal, seems beyond contradiction, from numerous observations. Still, in the progress of the disease itself there is not a recorded observation of any apparent affection of the absorbent or lymphatic system. The wound heals kindly; there is no inflammation nor tenderness of the lymphatic vessels or glands; the limb or parts adjacent to the wound is never swollen nor livid; in short, there is no one symptom of poison by absorption, such as is exhibited by the introduction of every known animal or vegetable poison, or of pus, into the vessels. On the contrary, from the moment of the bite from the animal, the disease assumes all the forms peculiar to spasmodic nervous affections. There is a strong analogy between its opening symptoms and purely hysterical affections of the throat, from intestinal or uterine irritations. In its progress and termination it resembles tetanus too much not to be ranked in the same class of diseases. The point peculiar to hydrophobia seems to be that the virus, after absorption, should affect the nervous system to the exclusion of the circulating, and that, even in such a way as to leave no trace of its progress after death.

ALPHA.

April 15, 1854.

CONSERVATIVE SURGERY.—By private advices from London we learn that Henry Hancock, Esq., Surgeon to the Charing Cross Hospital, of that city, has recently succeeded, in two instances, in saving a foot that would, but a very few years ago, have been amputated. In one case it was accomplished by resecting the astragalus—in the other the scaphoid bone. Such are among the triumphs of the art.

PORTRAIT OF FERGUSSON.—We have had the pleasure of seeing a beautiful lithograph of this distinguished surgeon. It is a copy of one not long since issued in London, and is pronounced to be a very excellent likeness. It has been issued by an ardent admirer of this eminent man, as a testimonial of his regard for him. The edition is limited; but copies can now be obtained in this city, of Bailliere, of Garrigue & Christern, or of Evans & Dickerson. The price is one dollar and a half.

NOTICE.—With the 1st of May, the office of the MONTHLY is changed. Will our correspondents and exchanges be kind enough to observe the direction on the cover?

THE AMERICAN MEDICAL MONTHLY.

JUNE, 1854.

PART I.—ESSAYS, MONOGRAPHS, AND CASES.

Remarks on Croup and its Treatment. By HORACE GREEN, M. D., &c., &c.

THE extent of the fatal cases of croup which have occurred among children, in the city of New York, during the last year, is almost without a parallel in the history of this affection.

The whole number of the fatal cases of this disease which, according to a statement furnished by the City Inspector, occurred in New York during the year ending February 28th, 1854, was *six hundred and eighty*! The subjoined table contains a statement of the number of deaths from croup, in each of the months of the above-mentioned year; and, also, columns to exhibit the relative proportion of males and females out of the six hundred and eighty fatal cases.

	Males.	Females.	Total.		Males.	Females.	Total.
1853. March.....	34.....	36.....	70	1853. October.....	38.....	43.....	81
“ April.....	29.....	26.....	55	“ November.....	31.....	39.....	70
“ May.....	27.....	22.....	49	“ December.....	47.....	42.....	89
“ June.....	28.....	14.....	42	1854. January.....	28.....	39.....	67
“ July.....	13.....	15.....	28	“ February.....	33.....	28.....	61
“ August.....	21.....	11.....	32				
“ September....	15.....	21.....	36		344	336	680

Undoubtedly, this disease, like many others, is influenced by atmospheric peculiarities, so as to assume, occasionally, an epidemic character, and, in certain seasons, to exhibit a great increase in its prevalence. As the various forms of angina have been more or less aggravated during the past season, it is not improbable that atmospheric peculiarities have also served to increase the frequency of croup.

We have no means of comparing the preceding statement of the fatal cases of croup, with the statistics of deaths from this disease in other places during the same time; but, on referring to an article published in the London Medical Gazette for 1850* on the subject of croup, we find that, in a population nearly fourfold greater than that of this city,† the average number of deaths from croup, during a period of eight years, in London, was less than three hundred and eighty a year. The number of deaths from croup in the whole State of Massachusetts, in 1851, according to the Registration Report for that year, in a population, at that time, of about one million,‡ amounted to four hundred and eleven. During the same year, in Suffolk county (which county includes Boston, Chelsea, &c.), with a population amounting to 145,000, the deaths were ninety-two.

It will be recollected, that at the census of 1850, the population of Kentucky was very near the same in amount with that of Massachusetts.¶

It is a little remarkable, diverse as are the climates of these States, that, with a population nearly equal, the number of fatal cases of croup should be so uniform. In 1852, according to the annual Report of the Registration of Births, Marriages, and Deaths, in Kentucky, for the above year, the deaths from croup were four hundred and sixty-one; just fifty more than occurred in Massachusetts during 1851.

In Philadelphia, the mortality from croup, in the five years preceding 1846, was seven hundred and fifty-six; or an average of one hundred and fifty-one a year,§ in a population which, at the census in 1850, amounted to 121,376.

These brief statistics will afford us some idea of the ordinary annual mortality from croup in some of the larger cities, and in different climates, and will exhibit, also, especially in comparison with London, the frightful mortality caused by the disease in New York during the last year.

It is now nearly fifty years since Napoleon issued, from the headquarters of Finkenstin, his celebrated general order—"d'ouvrir un concours sur la maladie connue sous le nom de croup," and offered a prize for the best essay on the nature of this disease, which served to awaken a new interest on the subject throughout the whole of Europe; and was the occasion of eliciting many learned, elaborate, and highly interesting works on the nature and treatment of this terrible malady. From that time to the

* London Medical Gazette, vol. x., p. 542.

† The number of the inhabitants of London, at the last census, was 2,362,236. In New York, in 1850, is was 515,547.

‡ At the census in 1850, the population of Massachusetts was 994,514. That of Boston proper, 136,881.

¶ The population of Kentucky was 985,405.

§ Dr. Meigs on the Diseases of Children, p. 84.

present, these inquiries have been pursued, in this country and in Europe, by eminent medical men, and the results published to the world ; but, has a plan of treatment yet been discovered, recommended, and adopted generally, that has had the effect to abate the severity of the disease, or, in any considerable degree, to lessen its fatality ? .

In that excellent treatise on Croup, by Dr. John Ware, of Boston, the author declares, that "the received mode of treating the disease," which is very much the same for all varieties, "has come down to us by a sort of tradition from our predecessors in the profession, and varies but little, if at all, from that which was originally adopted when the disease first became the object of attention. * * * In the main, emetics and bleeding, blisters and calomel, have been the principal remedies. The depleting, reducing, and perturbing method is that upon which dependence has been chiefly placed."*

This is, indeed, true, for it must be admitted that, whilst in the management of many other diseases great improvements have been made during the last half-century, in the traditionary treatment of this affection no modifications have been generally adopted which have served to diminish, in any amount, the number of fatal cases. On the contrary, the disease is admitted, by the best and most recent authorities, to be not only progressively on the increase, but, so far uncontrolled by the ordinary therapeutic measures, as to prove fatal in nearly one half of the whole number of those who are the subjects of this affection.†

These unfortunate results, which, in the statistical records of croup, have followed the ordinary mode of treatment, will be found to have been in no degree more favorable in the history of the disease as it has occurred in our city during the past winter ; and we do not hesitate to avow our firm conviction, that the employment of the reducing and perturbing plan of treatment, a plan recently recommended by more than one eminent writer, and still employed by many practitioners, has destroyed more lives, among young children, altogether, than it has been instrumental in saving. A work, by an eminent English writer, has recently been republished in this country, which has met with a very favorable reception from the profession generally, and has received the commendation of the reviewers, in our medical journals ; and yet, the method urged by the author, in his "Lectures on the Diseases of Infancy and Childhood,"‡ as the appropriate plan for the management of membranous croup, if fully carried out in the treatment of the disease, would prove fatal in its results, as we conscientiously

* Boston Medical and Surgical Journal, vol. xlii., p. 261.

† *Traité du Croup*, par M. Double, p. 479.

‡ *Treatise on the Diseases of Infancy and Childhood*, by Chas. West, M. D.

believe it has done, in more instances than it has proved remedial. That we may not be misunderstood in our remarks on this heroic plan of treatment recommended by Dr. West, and employed, to a great extent, by many practitioners in this country, we shall take the liberty of giving a brief statement of the therapeutic measures by him adopted.

In cases where an attack of croup "is merely apprehended, but where catarrh exists, attended with a slight, ringing cough," Dr. West recommends that the child "be confined to the bed-room, be placed on a spare diet, and should take an emetic of ipecacuanha and antimony, to be followed by some mild diaphoretic medicine containing small doses of antimonial wine."*

But, should the disease have attained its full development, before the patient comes under the notice of the physician; or, should its access be violent, a far more energetic plan of treatment is advised by Dr. West. "The abstraction of blood, and the administration of tartar emetic, are the two measures on which your main reliance must be placed; and you must bleed largely, and give tartar emetic freely, remembering that if relief do not come soon it will not come at all—that there is not danger only, but death in delay. I have never met with an exception to the rule which prescribes the free abstraction of blood in every case of severe idiopathic croup, when seen at an early period, and before the purple lips, and livid countenance, and failing pulse, announce the long continuance of a serious obstacle to the free admission of air into the lungs. Even in very young children local depletion forms, in these cases, but a poor substitute for general bleeding; for it is not merely the abstraction of a certain quantity of blood that is needed, but its removal in such a manner as most speedily to produce an effect on the system. Bleeding from the jugular vein is preferable, under these circumstances, to venesection in the arm, since the latter often fails in children under three years old; and the blood never flows so freely as when taken from the jugular vein."†

After bleeding "largely" from the arm,—or, what Dr. West considers preferable, "in very young children," from the jugular vein, *because*, in children under three years of age, "the blood flows more freely when taken from the jugular vein,"—the free administration of tartar emetic is recommended. To accomplish any real good by means of this medicine, "it must be given," says Dr. West, "in doses of an eighth, a quarter, or half a grain, every ten minutes, until vomiting is produced; and the same doses should afterwards be continued every half hour, until decided and permanent relief has been afforded." If the medicine, when administered in

* Diseases of Infancy and Childhood, by Chas. West, M. D., p. 221, Philadelphia edition.

† Ut supra, p. 221.

the same amount as at first, fails after a little to excite vomiting, it is advised by the author to increase the dose until this effect is fully produced. The antimony thus administered, is to be continued for four or six hours; when, if "no satisfactory measure of improvement should have yet appeared, local depletion may be resorted to, or possibly a repetition of general bleeding may in some cases be ventured on."*

Later in the disease, calomel, in combination with ipecacuanha, is administered every hour or two hours, "but interrupting its use at intervals in order to give an antimonial emetic;" and, finally, these active therapeutical measures above enumerated having been thoroughly tried, and tried in vain, Dr. W. advises that a totally different plan of treatment be at once adopted. "If antimony cease to vomit," he remarks, "or if it be rejected immediately, and without effort, the fluid thrown up being unmixed with phlegm or false membrane, while the temperature sinks, the lips grow more livid, the pulse more frequent and feeble, and the paroxysms of dyspnœa are undiminished in severity; or, if the respiration, though less laborious, be attended with a sibilant, instead of a stridulous sound, it is evident that by continuing the medicine we may destroy the patient, but shall fail to cure the disease."

Under such circumstances, "an attempt must be made to arouse the child from the state of collapse into which it is sinking, by placing it for a few minutes in a hot mustard bath, and emetics of the sulphate of copper should at once be administered."† If, to the therapeutic measures already enumerated, we add that of the use of mercury, which, in addition to its occasional administration at an earlier period, is to be employed at that stage of the disease when the patient "seems sinking into a state of collapse," and under these circumstances to be fully employed, by means of its internal administration, every hour, "while at the same time a drachm of strong mercurial ointment may be rubbed into the thighs every two hours," in order to bring the system as speedily as possible under the influence of mercury," together with the application of "a blister to the throat"—if these measures are included, we repeat, they constitute the plan of treatment strongly advocated by Dr. West, and employed by many practitioners, both in Europe and in this country, for the treatment of membranous croup. "Emetics and bleeding, calomel and blisters," *Medicina agens et perturbans*, the Sangrado, traditionary treatment of the last half-century! We can hardly imagine a plan more likely to prove unsuccessful, when fully carried out, than the method of which we have spoken; and if we consult the records of this plan, we shall find that, where it has been

* Op. citat, p. 222.

† Op. citat, p. 224.

adopted, this opinion of its effects will be entirely sustained by the results which have followed its employment.

A similar method, though in some degree less heroic, is advocated by Dr. Meigs, of Philadelphia, in his recent work on "The Diseases of Children."* In a "summary of the treatment," Dr. Meigs suggests "the following plan of treatment to be pursued in children about or over two years old, when we are called in good time: to take from the arm three or four ounces of blood, once, twice, or three times in two days, according to the strength of the child, and the degree and obstinacy of the fever. In both forms of the disease, emetics, and I would recommend alum in preference to any other, should be given once at least, very often twice, and, in violent cases, three or four times in the twenty-four hours, so as to produce vomiting attended with a good deal of effort. To give, at the same time, from one to two grains of calomel, with a quarter or half a grain of Dover's powder, every two hours, taking care not to give a dose for an hour before nor after the time selected for the exhibition of the emetic. In cases in which there is loud stridulous respiration, heard both in the inspiration and expiration, in which previous treatment has had no effect, and in which there is threatening of speedy death, we may give two grains of calomel every hour, until three or four doses have been taken, and direct the exhibition of an alum emetic after the last dose, or resort to tracheotomy."†

Certainly, in one respect, this "plan of treatment" is characterized by a great improvement on the wholly reducing and prostrating method ordinarily adopted;—namely, in substituting alum for antimony as the emetic in the treatment of the disease. His reasons for this are as follows: "Antimony, when resorted to as frequently in the disease as I am of the opinion emetics ought to be, is too violent in its action; it prostrates many children to a dangerous degree, and is, I fear, in some cases, itself one cause of death."‡

If, then, these positions, with regard to the generally-adopted, reducing plan of treating croup, are tenable—and in confirmation of these views we challenge inquiry into its history—is it not time for the thinking, *progressive* portion of the profession to conclude with Dr. Ware, "that the methods of treating this disease in common use, require a careful reconsideration"?

That there is a method of treating croup, which every practitioner may, if he will, adopt, and which, if promptly and appropriately employed, will arrest the disease in a very large proportion of cases, we unhesitatingly aver.

* A Practical Treatise on the Diseases of Children. By J. Forsyth Meigs, M. D., &c., second edition.

† Op. citat, p. 103.

‡ Op. citat, p. 97.

In 1848, the writer published a small treatise, "On the Pathology of Croup, and its Treatment by Topical Medications," in which the declaration was made that, "the practice of making topical application of medicinal agents into the larynges of young children, for the treatment of membranous croup, is a plan entirely practicable, safe, and, when judiciously employed, *in the highest degree efficacious*." This method of treating a disease hitherto so unmanageable, was founded upon the following propositions, which were then advanced, with regard to the pathology of the disease, namely: That the essential characteristics of true croup "consist in an inflammation of the secreting surfaces of the fauces, larynx, and trachea, which is always productive of a membranaceous or an albuminous exudation.

2. "That the membranaceous concretion, which is found coating the inflamed mucous surface of the parts in croup, is an exudation,—not from the membrane itself, but is secreted by the muciferous glands, which so abundantly stud the larynx and trachea.

3. "That the exudative inflammation commences, invariably, in the superior portion of the respiratory passages, and extends from above downwards,—never in the opposite direction."

Since the publication of the work in which this mode of treatment is advocated, the author has had the opportunity of treating many cases of croup on the plan deduced from this view of its pathology; viz., by means of topical medication,—not only in his own practice but in the practice of, and in conjunction with, other members of the medical profession; and with an amount of success that has afforded a high degree of encouragement and satisfaction.

He has also received from medical men, in different parts of the United States, as well as from numbers in Europe, the history of many cases of membranous croup, wherein topical measures, in their hands, have proved effectual in arresting the disease. In view of the great fatality, on the one hand, which constantly attends this disease, as ordinarily treated, and on the other, of the prejudice against the local treatment, which is still entertained by many; especially of the older members of the profession, the author does not feel at liberty to withhold from his professional brethren this abundant and most conclusive testimony in favor of topical medication in the treatment of croup.

It will not avail, for the cavilling opposer of this method of treating the disease, to rebut all testimony in its favor, as many in the profession, who, having always refused to try the plan, have persisted in doing,* with

* In a case of membranous croup that occurred in this city, the history of which was received from the attending physician, a prominent surgeon was called, by re-

the assertion, that the cases of croup which have recovered rapidly under local treatment "were not cases of true membranous croup, but those of a spasmodic, or catarrhal nature, such as would have recovered under almost any treatment;" for, in many instances the employment of nitrate of silver, in the treatment of croup, has been adopted with great success, by eminent practitioners, who had, previously, had extensive experience in the management of the disease, but who, before the employment of topical medication, had treated, unsuccessfully, a large number of cases by the ordinary "depressing, depleting, and disturbing remedies." This was the case, as with many others to whom we could refer, with the distinguished Dr. John Ware, of Boston, to whose experience, in the different modes of treating this disease, and the conclusions to which he has arrived, we shall now briefly allude.

It is well known to the reading members of the profession that several years ago Dr. Ware published his "Contributions to the History and Diagnosis of Croup"—a work evincing more scientific research, and containing more information with regard to the true pathology of membranous croup, than all that had been previously written in America. In these papers, Dr. Ware refers to thirty-nine cases of what he denominates membranous croup, which were noticed in his own, or in the practice of his friends. Of these cases the state of the fauces was observed in thirty-three instances, and "in thirty-two a false membrane was present; most frequently, and sometimes only, on the tonsils, sometimes on other parts also, as the palate, uvula, and pharynx. In one case no such membrane was present; but it was found to exist in the larynx after death. These thirty-three cases were treated by the ordinary therapeutic measures; and of the whole number, *three* only recovered—in thirty, the disease proved fatal. It is not at all surprising that, under these circumstances, Dr. Ware, eminent for his careful investigation and conscientious inquiry after truth, should have become "confirmed in the opinion," as he subsequently declares himself to have been, "that the methods of treating this disease, in common use, require a careful reconsideration;" nor that he should have propounded the question,—*"If the mode of treating croup commonly adopted, does no good, are we sure that it does no hurt?"*

quest of the family, in consultation. The case had advanced, until the symptoms were very urgent, and prompt measures were demanded, to save the life of the child. The physician in attendance proposed cauterization of the parts, rather than tracheotomy. The consulting surgeon positively refused to accede to the adoption of this plan, on the ground, that it was a dangerous, and, in such cases, a worthless measure. The physician, however, persisted in his proposal, and the surgeon retired. Cauterization of the larynx was then promptly, and perseveringly employed, and, by this means the life of the child was saved.

Having concluded, after the experience to which we have referred, to treat the disease "without the persevering use of the heroic remedies," Dr. Ware subsequently adopted a method in which "the treatment consisted—

1. "In the absence of all reducing, depleting, and disturbing remedies.
2. "Keeping the patient under the full influence of opium combined with calomel.
3. "Constant external application of warmth and moisture [to the neck], and of mercurial liniment, slightly stimulating.
4. "Constant inhalation of watery vapor."

In March, 1850, Dr. Ware read before the Suffolk District Medical Society "Additional Remarks on the Treatment of Croup," in which paper he refers to five cases of membranous croup, three of which were treated on the method indicated in the preceding propositions. The history of these five cases, as briefly narrated by Dr. Ware, with the conclusions to which he has arrived, we shall take the liberty of giving in his own words.

"The first case was that of a male, four years old, who was taken with membranous sore throat, accompanied by high constitutional irritation, Oct. 14, 1845. No croupy symptoms occurred till Oct. 18, when they were manifested in a perfectly distinct manner. On the 20th and 21st, patches of false membrane, with bloody sputa, were raised—and one piece of four inches in length. The raising of the latter was accompanied by a severe and suffocative paroxysm of coughing. On the 22d he died, eight days from the commencement of the disease and four from the access of croup. The suffering in this case was very considerable, but far less than I have been accustomed to witness in cases of croup treated according to the ordinary method."

"The second was that of a female, four years of age, taken with croup on the 8th of Nov., 1845. No depleting or reducing remedies were employed. Patches of membrane, and one piece of considerable size, were brought up on the 10th, and a few following days. She never suffered much, improved steadily, and on the 15th seemed well in all respects except the voice, so that on the 16th I did not see her. On the 17th there was a return of all the croupy symptoms, including the appearance of lymph upon the tonsils, and she died on the night of the 19th, eleven days after her first seizure. During no part of the disease was the suffering from dyspnoea very intense for any continued period.

"On dissection, the usual appearances were found, and in one lung the false membrane extended for some distance into the bronchi in the substance of the organ."

"The third case was a female, six years of age, who was seized with the disease Oct. 31, 1847. The onset of the disease was gradual, yet quite dis-

ting. Nov. 2d, the symptoms had become quite severe; and Nov. 3d, there was bloody expectoration, and pieces of membrane were spit up. Pieces of membrane continued to be found in the sputa for several days, and she was very comfortable and breathed with tolerable ease, yet never losing the distinct croupy sound of respiration and voice. She retained some appetite and sat up and amused herself as usual. On the 8th, she became rapidly worse, but without distress, and died on the 9th, quite easily, ten days from the first attack of the disease.

"It will be admitted, I think, that these cases, especially the two last, exhibited certain differences from the common course of this disease, which indicated a favorable influence from difference of treatment.

"In all of them the membrane was thrown up in considerable quantities.

"In all of them the disease was attended by very much less distress than is usual in croup, and, in two, there was so decided a mitigation of symptoms following the separation of the membrane, as to lead to considerable hope of a favorable termination.

"In two, at least, the disease was prolonged to at least twice its average duration under the usual treatment.

"In the two other cases, to which reference was made, the same general course of treatment was followed, with the addition of the introduction of a sponge, wet with a solution of the nitrate of silver, into the larynx. In each of these cases the application was made as early in the disease as I became satisfied of its distinct character. It was repeated morning and evening. It decidedly gave relief to the breathing, soon after each application, and both cases ultimately recovered perfectly. For the suggestion and adoption of this valuable addition to our means of treating this formidable disease, we are indebted, as is well known, to the enterprise of Dr. Horace Green, of New York. The profession, I think, owe to him a large debt of gratitude, for the energy and perseverance manifested in the introduction of this remedy, and I am the more disposed to render this tribute to him, because so many attempts have been made to detract from his merit in relation to it.

"I am well satisfied from what I have now seen of this method of treating croup, as compared with that which has been followed for so many years, that it has the advantages which were pointed out in one of the preceding papers. It is a disease which I would treat without depletion—except, perhaps, by a few leeches—without vomiting, without purging, without blisters, without antimonials, ipecac., and all those other nauseous remedies which have been usually resorted to. I would trust to opiates, perhaps calomel, emollients, and the local application of the nitrate of silver.

"I ought to add that many of my friends in the profession have informed

me of cases in their practice, treated on these principles, which have recovered in a favorable manner.”*

Since the publication of Dr. Ware’s papers, cauterization of the larynx, in the treatment of membranous croup, has been adopted by large numbers of medical men in New England, from many of whom we have received communications on this subject, expressing their full confidence in this therapeutic agent, when timely and appropriately employed in the management of croup.

Should we give the history of a tithe of these cases, which have been thus reported to us, they would occupy a much larger space than can be appropriated to this subject in the pages of the MONTHLY. In many instances—and this is the testimony of large numbers of practitioners, experienced in the disease—the morbid process has been promptly arrested, by topical medication to the surface of the tonsils and pharynx without the introduction of the sponge-probang into the larynx.

If the proposition, with regard to the pathology of the disease, be admitted, namely:—that the exudative inflammation in croup commences invariably, as a general rule, about the fauces and upper portion of the respiratory tubes, and extends from above downward, it must be apparent that no remedy can prove so effectual in arresting the morbid process as cauterization.

That this is the true pathology of the disease has been fully established, not only by many impartial observers, but also by the success which has attended the practice founded upon this view of its nature: it is, moreover, so declared to be by some of the most eminent and experienced pathologists of the present day.

“In true croup,” says Rokitansky, “which is essentially a disease of childhood, the exudative process often affects the throat and pharynx, and it extends from the epiglottis through the larynx and trachea—in some instances to the minute ramifications of the bronchial tubes—but the points it most commonly attacks are the larynx and trachea.”†

Prof. Hasse, also, whose late work on Pathological Anatomy has been translated and published by the London Sydenham Society, observes, with regard to the exudatory inflammation of croup, that its progress is invariably from above downwards, and that it never spreads in the opposite direction. “This law is so universal, that where plastic inflammation occurs in the bronchi of the adult, as the concomitant of pneumonia, it can only descend to the pulmonary cells, never mount to the larynx.”‡

* Boston Medical and Surgical Journal. Vol. xlii., pp. 267, 268.

† A Manual of Pathological Anatomy. By Karl Rokitansky, M. D. Sydenham Edition, vol. IV., pp. 20, 21.

‡ An Anatomical Description of the Diseases of the Organs of Circulation and Respiration. Sydenham So. Edition, p. 276.

Still farther to sustain these views, not only of the nature of the disease, but of the positive efficacy of topical treatment in every stage of membranous croup, we shall proceed to adduce further testimony on these most important points.

In a recent number of the "*Archives Générales de Médecine*," is an interesting memoir by M. Vouthier, on the history of croup, as it occurred in an epidemic form in *L'Hôpital des Enfants Malades de Paris*.

In this paper are the details of several well-marked cases of membranous croup, which were treated successfully by "emetics and cauterizations;" and although in these instances the argentine solution was not conveyed into the larynx, but was applied only to the fauces and pharynx, yet the patients recovered perfectly under the treatment.* Although the cases thus treated are characterized as having been very severe—"très-intense"—yet, as the treatment was early adopted, it is probable that the exudative process had not extended into the larynx; for, in the same paper is a history given, of five other cases of membranous croup, in which the disease, having reached the larynx, was not arrested by cauterizations. This measure was employed, as in the other cases, but no attempt was made to pass the instrument below the epiglottis. Tracheotomy, however, was resorted to in all these five cases, but every patient died. Efficient cauterization of the larynx, we maintain, would have saved three, if not more of these last cases.

A few weeks ago, a physician from the interior of one of our South-western States, called on us to state his experience in the treatment of croup by local measures. Two or three years before, he had passed several weeks in our city, and had then seen, for the first time, the employment of topical medication for the treatment of laryngeal and bronchial diseases. Returning to his home in the West—a region noted for the frequency with which croup occurs among children—he commenced at once to put into practice the new method of treating disease, with which he had recently become acquainted. During his previous practice, he had treated many cases of croup in the ordinary method, and the proportion of deaths, in his experience, as he stated, had been quite equal to one-third of the whole number attacked. But since the adoption of topical medication, during the two or three years after his return, some fifteen cases, he affirmed, had come under his observation, and were treated by cauterization of the fauces and larynx, *every one of which recovered*. The plan adopted by this physician was the same as that, to which we shall briefly refer, at the close of this paper.

As before asserted, since the publication of our work on croup, we have received similar verbal statements, in favor of topical medication, from phy-

* *Archives Générales de Médecine*. Tome xix., art. 1st.

sicians resident in almost every State in the Union; but we have also abundant *written* testimony on this subject.

The following cases from Prof. May, of Washington, who is one of the most distinguished of American surgeons, will be read with much interest.

Washington, April 30th.

My Dear Sir :

I herewith enclose you a hasty and brief account of the cases of cyanche trachealis, in which I have used the strong solution of nitrate of silver, as recommended by you in your work on croup. The statement of these cases is not as full and satisfactory as I could have desired, owing to the partial notes hastily taken by me at the time of their occurrence; but the result, in several of them, fully sustains the great value of the local agent recommended by you, to arrest this formidable disease, and which you have been, I believe, the first to bring fully to the consideration of the profession.

I am very truly and respectfully yours,

JNO. FRED'K MAY.

Case 1st.—On the 2d Jan. I was called on to visit a son of Mr. C., of this city, aged about ten years, whom I found laboring under symptoms of croup. The child had been complaining of some uneasiness about the throat, with hoarseness and slight cough, a day or two before I saw him. At my visit, his respiration was difficult, and there was a good deal of tenderness about the tonsils and fauces, which were inflamed. There was considerable febrile action, and the little patient was very restless, and the voice quite hoarse. I directed an emetic, to be followed by an active mercurial cathartic, his bowels being constipated, and such local applications, both internal and external, as I thought most likely to give relief.

At my visit next day, I found my little patient no better, but, on the contrary, his symptoms were more unfavorable and alarming. His respiration was very difficult, and his countenance expressed great suffering and anxiety. He could not remain more than a few moments in a horizontal position, but was raising himself up continually, and stretching backwards the head to obtain relief. In a word, the difficulty of respiration was extreme. He was very hoarse, his pulse very hurried, and the throat and tonsils more inflamed than at my previous visit. The symptoms of diphtheritic croup, which had been epidemic in our city the year previous, were very decided. I at once resolved to try your method of introducing a strong solution of argent nitrat. into the larynx—everything else having been tried by me, in this disease, the year previous, not excepting tracheotomy, with but little success. The symptoms were very urgent. I felt satisfied that, unless soon relieved, the case would probably end fatally. I had no instrument sufficiently small for the object I had in view, and I therefore bent a small piece of ash stick to the proper curvature, and secured to the end of it a small piece of sponge, which I saturated thoroughly with a solution of the crystallised nitrate, of the strength of forty grs. to the ounce, and introduced it fairly into the larynx. This I repeated once or twice, on the spot, the child being forcibly held by the father. There was considerable irritation pro-

duced in the throat, for a few moments, but I believe it was caused as much by the effort, on the part of the child, to resist, as by the action of the caustic.

I remained some time, after using this remedy, and in half an hour the improvement in his breathing was manifest to all present. I left him breathing decidedly better, and when I returned in the morning I found the child had passed a quiet and comfortable night, having slept a considerable portion of it. The caustic solution was again used by me, in the same way, at this visit, his breathing having again become somewhat more difficult, and with the same improvement in his condition. My visits to him were soon after discontinued, the little patient having entirely recovered.

Case 2d.—I was requested in May, by my friend, Dr. Dawes, to visit, in consultation with him, in the country, a little girl of two years of age, the daughter of R. S. Wood, Esq.

Dr. D. had been in attendance on the child for several days, and had administered the usual remedies in her disease, which was membranous croup. Having mentioned to him, some time before, the success of the argent-nitrat. solution, in the case which I have already stated, he was desirous of having it used in the present instance.

When I saw the child the breathing was extremely difficult, and the cough tight and ringing. The little patient was much exhausted, having slept but little during the twenty-four hours which had passed. It was constantly held by the mother in her lap, or by some of her friends, as the respiration became more labored when she was placed in the bed. I at once used the solution of crystalized nitrate of silver, introducing it into the larynx, and cauterizing also the back part of the throat, freely. The solution was of the strength of fifty grs. to the ounce.

The respiration became easier before I left the house. This was apparent to all, and at the same time the pulse improved, and the skin became more natural and warm. On our return, early in the morning, we found the little patient had passed a much more comfortable night, and her breathing had decidedly improved. The caustic was, however, again used, and with an equally satisfactory result. The symptoms of the disease gradually yielded, and the child recovered. As I was not aware, or had forgotten the treatment which had been pursued, in the commencement of her case, I applied to Mr. Wood, who had formerly pursued the study of medicine, for a statement of it. I received the following reply :

“My daughter, about two years old, was attacked with croup in the month of May last. She had never suffered previously from any disease, and her constitution was good. After trying the usual domestic remedies, such as hot baths, emetics, local applications, and small doses of calomel and ipecac. frequently repeated, we were induced to send for our family physician, Dr. Dawes, who prescribed mercury to the full extent warranted by her critical situation. On the third day, the doctor proposed consulting with you, in regard to the propriety of introducing a strong solution of the nitrate of silver into the larynx. I readily gave my consent, and the operation was performed twice within twelve hours. The character of the respiration was perceptibly changed on the first trial, but we felt doubly sure of

success on its repetition; the pulse rallied, and the color of the skin became more natural.

"She is now enjoying perfect health."

Other cases have been treated by Dr. May with equal success, the history of which have been furnished by him; but, as our object has been to give the testimony of different members of the profession, from various localities, these may with propriety be omitted.

Dr. A. M. Vedder, Lecturer on Anatomy and Physiology, at Union College, has treated many cases of membranous croup by topical measures. The subjoined cases were communicated by Dr. V.

Even at the present day, there are medical men who will not admit that the passage of an armed probang into the larynx of the adult can be accomplished. Much more emphatically do these men deny the possibility of cauterizing the larynx of the young child. Within the last year, an astute professor in one of our medical colleges declared, before his class, his firm belief that the operation had not been, and never could be, performed! To such "blind guides," we would commend the interesting fact recorded in the second case reported by Dr. Vedder.

Case 1st.—A little girl, aged six years, was under treatment by a neighboring practitioner, who called me in consultation. She was first taken with what we supposed to be slight catarrhal symptoms; after a few days, the cough became stridulous, and was accompanied with some fever. These symptoms continued for three weeks, gradually increasing in severity. At this time I saw her, in the evening, and found her laboring under the characteristic symptoms of inflammatory croup; pulse rapid, and small; voice reduced to a whisper; respiration high and labored; tonsils red and inflamed, but not covered with false membrane. The attending physician had treated her with sinapisms, calomel, and tartar emetic, the latter in emetic and nauseating doses.

I suggested the topical application of nitrate of silver, which was readily acceded to. Two applications were made (℥ii. to ℥j. aqua). The probang was found covered with a thick, tenacious secretion. Respiration became somewhat more free. On the following day, there was a marked increase of all the symptoms, the silver was again applied three or four times during the day, entering the glottis each time. There was now a gradual improvement of all the symptoms, and no further applications were made. During this time, calomel and James' powder were also administered.

Case 2d. Louisa —, aged six years, general health previously good, came home from school (Nov. 1st) complaining of sore throat and cough, which was followed by vomiting. A homœopathic doctor was sent for, who treated the case as "sore throat" for five days; during this time, she was not wholly confined to the bed, and was about the house a part of the time. On the afternoon of the fourth day, she became very

hoarse, with loss of voice and decided croupy cough. Nov. 6th, Confined to bed, with considerable heat of skin and thirst. I saw the patient this day, for the first time, at 6 o'clock, P. M. Expression of countenance anxious, skin pale, voice reduced to a whisper, respiration extremely difficult, high and characteristic, pulse frequent, skin above natural temperature, cough frequent; applied the nitrate of silver with the probang, which did not produce any unpleasant symptoms, her breathing became somewhat easier; during the night her respiration became more difficult, and an emetic was administered, which was followed by some relief. Nov. 7th, A. M., Countenance still anxious, color of skin inclining to blue, respiration not much improved, almost complete aphonia,—prescribed the following powder, to be taken every three hours.

R. Tart. Antim., gr. $\frac{1}{8}$,
 . Hyd. Chlor., M. gr. $\frac{1}{4}$,
 m.

Applied the silver three times during the day. Nov. 8th, No improvement, sweats now freely, and has done so all night,—on coughing expectorates a little mucus, particularly after applying the sponge, continue powders and apply cold water to the neck by means of a towel. Nov. 9th, No improvement; applied the sponge, and on removing it *the false membrane* was found attached to the sponge; and on examination found it to be a membranous tube two and a-half inches in length, and about one half the thickness of milliner's pasteboard. Her respiration became immediately easier and she continued to improve from this time, the sponge was not again applied, her cough remained "croupy" for several days longer, her voice did not become natural for more than a week after, the cold water and expectorants were continued for several days. Her health has been good since: her voice becomes hoarse, occasionally, on taking cold. I should have remarked, that at my first visit, I saw patches of lymph on the tonsillory glands. On taking charge of the patient (which I did with great reluctance), I had very little hope of a favorable termination, on account of the advanced stage of the disease, and must attribute the cure to the application of the silver.

Since treating this case I have used the silver with varying success. In two cases, in which I was called early, and in which the lymph could be seen in the upper part of the fauces, the patients recovered. In one case where I was called in consultation, the patient was in *articulo mortis*. We used the silver without any relief. In two other cases, I was called late in the disease; the nitrate of silver, and other remedies were employed; but both cases terminated fatally.

Believing, as we conscientiously do, that the reducing, perturbing, plan of treating young children for croup, is, in a large proportion of cases, not only useless, but worse than useless; and that, on the other hand, we have, in the topical treatment, when judiciously combined with mild general measures, an entirely practicable, and, in most cases, an effectual means of arresting the disease, we are solicitous to remove the objections, which, for various reasons, exist in the minds of many practitioners, and hinder

their adoption of this method. We have alluded to the dogmatic scepticism of one class, but fortunately this class of "unbelievers in the earth's rotation," is very small. Still, there is a much larger class, who, whilst they admit both the practicability and utility of the treatment, reject its employment because of the supposed difficulty of medicating the larynx in disease. This difficulty, we can assure the profession, does not exist. It is neither really difficult to accomplish, nor is it in any degree a hazardous operation. Any medical man who understands the relative anatomy of the parts, can, with very little practice, readily pass the sponge probang into the larynx; and, as benefit comes from the attempt (for the parts cauterized thereby are those first affected in croup), no time should be lost in putting the method into practice, in the onset of the disease.

During the prevalence of the disorder, last winter, when the writer was receiving calls, daily, to visit cases of croup, a request came from a physician residing in Morrisania, to meet him in consultation in a case of membranous croup. As the writer could not comply with the request, his assistant, Dr. Richards, attended the consultation; and he testifies to the fact, that the case was one exhibiting all the characteristic signs of true croup, of a very severe grade. The physician, Dr. Mann, who is an accomplished and experienced practitioner, had had many opportunities of treating croup by the ordinary method; but in this case, which we shall give, he employed, for the first time, we believe, cauterization of the larynx; and it will be seen that in his hands, the operation was both practicable and successful. So much pleased was Dr. M. with its effects that he has since placed his entire dependence, as it will be seen, on topical medication alone in the treatment of the disease.

The following communication has just been received from Dr. Mann:

Morrisania, May 12th, 1854.

DOCT. HORACE GREEN,

DEAR SIR:—The enclosed list of cases of Cynanche Trachealis, I send agreeably to your request. In none of them were any internal remedies used, not even a preparatory emetic, except—where circumstances required it—a mild cathartic. With this exception, they were all treated by topical applications exclusively.

Case 1st.—On the 7th of February last I was sent for, at 4 o'clock, A. M., to attend Alfred —, aged four years. Circumstances prevented my seeing him until 8, A. M. I then found him laboring under true membranous croup. The attack commenced on the evening of the 6th, preceded by hoarseness and slight cough. I had previously attended the patient on Jan. 8th, for pneumonia of the left lung, from which he had recovered perfectly, though still somewhat weakened by this illness. I found the little fellow struggling for breath, each effort at inspiration accompanied by a loud crowing sound, the muscles of the mouth contracting

violently at the same time, the countenance and lips livid, a cold perspiration standing in large drops upon the face, and every symptom indicating rapidly-approaching dissolution. I immediately passed through the larynx and nearly down to the bifurcation of the trachea, a sponge-armed probang containing one drachm of a sol. argent. nit. xl. grs. to $\frac{3}{4}$ j. The first effect of this application was a severe fit of coughing and choking, followed by copious vomiting, which relieved the respiration temporarily. Between this time, viz., 8 A. M. and 7 P. M., five applications were made; at about the latter hour Dr. Richards saw the patient with me. We found him sitting up, perfectly conscious and able to speak, and had taken some beef tea. Respiration entirely free from any crowing sound, which could now only be heard during a fit of coughing. Skin moist. *Feb. 8th.* Continues still improving; respiration natural; slept at intervals during the night; appetite craving; cough troublesome; slight fever; face flushed. *Feb. 9th.* No symptoms of croup remain; slight bronchitis, which yielded in a few days to mild remedies.

Case 2d.—On Feb. 11th, I was called to see Sarah —, aged two years. The patient had been suffering for two days previously, with hoarseness, and what the mother called a “sore throat,” accompanied by a loud ringing cough. On examination of the larynx and fauces, I found them considerably inflamed. The tonsils were enlarged; and, adhering to the posterior surface of these glands, I discovered a white substance lining them, and extending downward toward the larynx. The symptoms of true membranous croup were strongly marked. Skin hot and dry; face flushed; countenance expressive of anxiety and suffering; cough and respiration characteristic. I immediately made an application by means of the sponge probang to the fauces and larynx, of a sol. argent. nit. grs. lx. to $\frac{3}{4}$ j., then passed through the rima glottidis.

Feb. 12th. Patient playing about the room; respiration natural; cough troublesome, and accompanied by a free secretion of thick, ropy mucus, which the patient, on raising, immediately swallows. Detached the white substance from one tonsil, and found it to be a firm membranous exudation. This child had one other application of a weak solution, and was perfectly recovered on the third day after the first visit.

Case 3d, Feb. 25th, John —. This patient was seized with slight hoarseness toward evening, on the 24th, but awoke at about 4 o'clock, A. M., with unmistakable symptoms of croup, which were rapidly increasing in urgency and danger. Ipecac. onion draughts, and mustard, with other domestic remedies having failed to produce relief, I was summoned to the sufferer. Applied a sixty-grain sol. at once, 7 A. M. At 4 P. M. found the respiration much relieved, the patient being better in every respect. Applied a thirty-grain sol.

Feb. 26th. The little fellow saw me tying my horse, and fearing, as he expressed it, that I was going to “run the poker down his throat again,” scampered off and hid.

The above cases it gives me pleasure to submit to your perusal. I should have regarded any one of them as nearly hopeless under the old plan of treatment.

Very respectfully yours,

F. P. MANN.

Doct. Horace Green, 12 Clinton Place.

With the history of one more case, voluntarily furnished by Dr. M., an intelligent physician of a neighboring State, we shall close our selections from the mass of testimony that has been received, in favor of the plan of treatment advocated in these pages.

DEAR SIR:—

You will excuse the liberty which I assume in thus addressing you. I cannot forego the opportunity I have in expressing to you the gratitude I now feel for your kindness to me, and for the information I acquired in the short time I passed in your office, during my late visit to your city. So elated do I feel with the result of your mode of treating diseases of the air-passages, that I must trouble you to read an account of my first experience in the use of topical applications, in an interesting case of croup.

Feb. 18th, at 8 P. M., a gentleman entered my office, in some haste, and requested me to step across the street and see his child, which he feared was dying. Without ceremony or question, I accompanied him home, where I found two physicians, with some dozen, more or less, neighbors, surrounding the bed of a little fellow, six years of age, the sound of whose inspiration and expiration was to me a sure index of the nature of his disease. In the diagnosis we could not be mistaken. He was in the very last stage of membranous croup. The patient was of a bilious temperament, black hair and eyes, dark complexion, very large head, with a short and very thick neck; broad chest, and, for a boy of his age, very muscular. It was with the utmost difficulty that he could breathe, every muscle of the body seemed brought into action, at each respiration; the countenance was flushed and anxious, the lips pale and swollen, the eyes protruded, nostrils dilated, and ever and anon that cough, the sound of which you know, but which I cannot describe; pulse beyond enumeration. All these were sufficient to cause the friends and physicians, as well as myself, to believe the child to be in *articulo mortis*. I, however, proposed cauterization with the probang; the physicians, after explaining to them what I *meant*, opposed it, on the ground that it was not only perfectly useless, but that it was utterly impossible to pass it into the larynx; the which, I of course flatly denied. I then, without much regard to professional etiquette, as the case demanded action rather than ceremony, and also because I was determined, if possible, to try your plan, explained to the friends, as well as I could, the nature of what I proposed to do, the objects in view, and the probable results that might reasonably be anticipated; nor did I keep back the fact, that the child, notwithstanding, might die.

The friends immediately consented to my doing what I pleased, as the child would die without immediate relief. All the usual remedies, such as emetics, leeches, blisters, &c., had been used. I immediately made a sol. of argent-nitrat. cryst. fifty grs. to the ounce of aqua. distil., saturated the sponge, and made the attempt to pass it into the larynx; the child struggled and I did not succeed, but what was very good, I did succeed in sponging the fauces and epiglottis. My failure, however, to pass into the larynx, was a sort of triumph to the nonbelievers. However, the child strangled, coughed, and discharged considerable ropy mucus. After a delay of some fifteen or twenty minutes, I secured the head of the child,

and made the attempt again; and what is *better*, I *succeeded well*. The little fellow strangled, coughed, and discharged a large quantity of thick ropy mucus, with patches or shreds of membrane, and in one minute was sensibly relieved. In ten minutes, the wheezing sound, in expiration, was gone. Then was my hour of triumph, and I made use of it. After waiting a half hour, I prescribed hyd. sub. mur., gr. i.; ipecac., gr. i.; opii., gr. $\frac{1}{8}$, every hour, and left for home.

It will be unnecessary to follow out the farther history of the treatment in this case, as detailed by Dr. M——. Topical, with the required general treatment, was continued for several days, and the patient recovered perfectly.

The history of these last cases have been given, not only as corroborative of the efficacy of the treatment, but to show, what has proved true in many other instances, that where intelligent medical men have made the attempt, earnestly, to medicate the larynx, their efforts have, in all cases, been successful.

It was our intention at the close of this paper to have submitted a detailed statement of the plan, both local and general, that we would advise to be pursued in the treatment of membranous croup. But the pages allotted us in the *Monthly*, have been already fully occupied. Besides, these views have been stated at length, in our work—"Observations on the Pathology of Croup, and its Treatment"—which has been several years before the medical public.* The accumulated experience furnished from

* With regard to the general treatment in the management of croup, we accord fully with Dr. Ware, in the propriety of avoiding, generally, "all reducing, depleting, and disturbing remedies." We would administer, as required, mild emetics, of ipecacuanha, or ipecac. and sulphate of zinc. Calomel alone, or in combination with Dover's powder, or opium, is frequently required, but never in *scruple doses* as it has been recommended to be given to young children, by some practitioners in this city. These remedies, together with the inhalation of the vapor of warm water, may be employed in the treatment of croup. But our main dependence, in all stages of the disease, should be on *cauterizations*. "This measure," says Prof. Wood, in his work on the "Practice of Medicine," "after an unsuccessful employment of other means, the practitioner would certainly be justified in resorting to." We would advocate its employment in the very access of the disease, as soon as the nature of the malady is ascertained. We have seen the disease repeatedly arrested in its formative stage, by a few prompt applications of the nitrate of silver to the fauces, and about the opening of the glottis.

After the inflammation has advanced, and the surfaces of the larynx have become involved in the disease, the argentine solution should not only be applied to the tonsils, and to the faucial region generally, but the applications must be extended into the laryngeal cavity.

If the exudations are not already formed into adventitious membrane, the employment of a few successive applications below the epiglottis may be sufficient to

the treatment of a large number of cases of croup, since the publication of that work, on the plan therein advocated, *without the loss of a single patient, in our own practice*, has confirmed us in the opinion of its efficacy over all other methods hitherto advanced, for the treatment of this terrible malady; and it has impressed us, with the full belief, that had the prejudice against topical medication not existed with the profession in this city—a prejudice, which we regret to add, has been excited, and fostered by some of our prominent medical men—and this method conjoined with *mild* constitutional remedies, had been generally adopted, in the treatment of those *six hundred and eighty* fatal cases of croup, which occurred during the last year, not one half of that number would have perished, at least from that disease of which they died.

Clinical Lectures on some of the principal Diseases of the Eye. Delivered at the New York Medical College, East 13th Street, May, 1854, by ISIDOR GLÜCK, M. D., Cor. Fellow Med. Soc. of London.

CATARACT.

GENTLEMEN! You see in this juvenile patient a cataract in both eyes.

True cataract consists in partial or total opacity of the crystalline lens, of its capsule, or of both, with a corresponding diminution of sight.

Many theories have been advanced respecting the formation of cataract, but they are untenable; we are at a loss to conceive the manner in which it is formed, and know little of the nature and changes that produce the opacity. In many instances it cannot be accounted for. Pathology and physiology give no satisfactory elucidation of it. Mental depression, or circumstances tending to depress the constitutional powers, may predispose

arrest the plastic inflammation altogether. But even in a more advanced stage of the disease, when, from its continuance and the severity of the disease, we have reason to apprehend the formation of a false membrane, or a “tubular mould” throughout the larynx and trachea, we should not despair of removing the obstruction, or of arresting the inflammation.

When called, therefore, to a case of croup in this its second or developed stage of the disease—and unfortunately, it is not until this period of the affection that medical aid is resorted to, in a large proportion of the cases of croup—the local employment of the nitrate of silver, conjoined with other appropriate measures, should be entered upon at once.

An application may first be made to the tonsils, and about the opening of the glottis. After a delay of from fifteen minutes to an hour, the operation may be repeated, and the sponge wet with the solution should then be passed into the larynx. The cauterizations may be repeated once in two, four, or six hours, according to the effect produced and the intensity of the disease.

to its formation. Often it is hereditary or congenital, when it depends on an arrest of development. As an idiopathic affection, it is met with in infancy, when the opacity exists in the lens as well as in its capsule; or in advanced age, when it is in the lens. Sometimes, however, cataract is caused by a chronic inflammation or determination of blood to the eye, and takes place in consequence of an injury inflicted on it.

Cataract is usually formed slowly; it may require years, months, or weeks for its complete formation; or it may develop itself suddenly in a few days, or even in a few hours.

The opacity usually begins in the centre of the pupil, and extends to the circumference; consequently, light passes through the less dense circumference of the crystalline lens, and enables the patient to see the objects laterally when he cannot see them directly in front; for the very same reason, the mistiness which accompanies the early stage of cataract is greater in a bright than in a subdued light. Sometimes, however, the cataract begins at the circumference, and the patient is not even aware of its existence, until its progress impairs the sight.

The chief subjective symptom is impairment of vision, which manifests itself in different forms. The patient perceives objects as if surrounded by a mist or fog; these seem, sometimes, multiplied or distorted; the patient fancies that something intervenes between him and the object he looks at; the haziness or cloudiness increases gradually, according to the degree of the opacity. The cloudiness becomes, sometimes, denser and denser, until useful vision becomes destroyed; as in this boy, who merely recognises, as you observe, the presence or absence of light, the position of a window, or the shadow of a passer-by between himself and the sunshine, but can see nothing beyond that—in short, is totally blind.

You recollect, gentlemen, that I remarked to you, in demonstrating the anatomy of the eye, that at the different periods of life the crystalline lens is subject to natural alterations. In infancy, it is almost spherical, and softer than at any other period of maturer age; as the consistency of the lens increases, its form changes somewhat, and it presents a less spheroidal form; in the adult, it offers the form of a double-convex body, more convex behind than in front, and is denser than in youth. The colorless lens, I stated to you, also gains about the 30th—35th year a light yellowish tint, more visible in its nucleus, and extending towards its periphery, with advancing age, so much so as to offer the color of amber, penetrating deeply the pupil. In negroes, however, this yellowish tint occurs often earlier, and is more intense, without disturbing the function of vision. A deviation from these natural changes causes morbid appearances, which serve as symptoms of these different diseases peculiar to the lens and its capsule.

Divisions.—The most natural basis of division of cataract is its seat, and it is called, according to this, *lenticular*, *capsular*, or *capsulo-lenticular*.

Lenticular cataract is of frequent occurrence; more rare is a capsular one; the most frequent form is the capsulo-lenticular. The latter form you meet with in this instance; but, in order to recognise it, it is necessary that you should be acquainted with the peculiarities of the two other forms, namely, the lenticular and capsular, which, combined, produce the variety under our consideration.

Lenticular cataract presents, in general, the following *anatomical symptoms*: An opacity of a bluish white tint, varying from white to gray, or to the yellow color of amber, to green,* or, sometimes, even to brown; but generally uniform, or shading off from the centre to the circumference, without any sudden transition of one tint into another. The opacity appears dull to the naked eye, and, chiefly by the aid of the magnifying glass, presenting small points or opaque granules, which are formed by the molecules of the lens situated behind the anterior part of its capsule.

Physiological symptoms.—Sight more or less impaired, but always corresponding to the extent of the opacity; in the beginning, objects appear dim and misty; vision becomes gradually diminished, with the increasing extent of the opacity, until it is entirely abolished, but never so much that the light should not be perceived, or the shadow of an opaque body moved before the eyes of a patient thus affected.

* Iconographie Ophtalmologique, I. Sichel, 6 Livraison, 1852.

My teacher, Prof. Iager, of Vienna, has first described this form of cataract, and distinguished it from glaucoma. Subsequently, M. Sichel detailed it fully in his *Traité de l'Ophtalmie*.

I frequently met with similar cataracts in the Westminster Ophthalmic Hospital in London, where, among the great number of cataract patients annually received as inmates, almost every variety occurs. For the last four years I had the particular advantage of examining, and watching closely, the out and in patients of that hospital, under the care of Messrs. Guthrie, Hancock, and other friends attached, as surgeons, to it, to all of whom I am under great obligations for it. The number of out-patients seen there thrice a week ranges from 200 to 300, whereas 40 beds are reserved for the inmates.

The strict military order kept up by "old Guthrie," with youthful vigor and spirit, in his surgical staff, as well as in all the arrangements of the hospital, contributes much to the comfort of the patients, while it affords, on the other hand to pupils and visitors, ample opportunity of studying the great variety of eye diseases, of watching their treatment, and, above all, enables the pupils to judge for themselves, by the results, of the different methods of operating chosen and used by the ophthalmic surgeons attached to it. "Old Guthrie's" remarks, founded as they are on long experience, ingenuity, and originality, are both instructive and interesting. In his treatment, medical as well as surgical, he neither clings to old views nor does

Lenticular cataract is divided, according to its consistence, into *hard*, *soft*, and *liquid*.

Hard lenticular cataract consists in an opacity, varying in color from yellowish gray and steel gray* to the different tints of green and brown, darker in the centre, which first becomes opaque, and clears off in the circumference. A mixture of gray and amber, often with the prevalence of amber in the centre, is the ordinary characteristic appearance of a hard cataract. The intensity of the amber color may be so great as to offer a dark brown color. The darker its color, the slower its formation, and the longer it has existed, the greater is the probability of its being hard. In hard lenticular cataract the iris is not convex, but is plane on its anterior surface, and is the more distant from the cataract the harder the latter is. The shadow of the iris, thrown on the anterior capsule, is visible; the pupil is contracting and expanding according to the various degrees of light; the anterior surface of the lens is very distant from the iris; the pupillary margin is scarcely visible, chiefly if the iris is dark-colored.

The common firm cataract, with the yellowish centre, shaded off towards the periphery into a gray, is generally met with in individuals of an advanced age. Occasionally it occurs as an idiopathic cataract, without any previous change of the textures of the eye, the constitution being sound, and the affection restricted to the lens, which appears smaller than natural at a small distance from the unaffected capsule. Hard lenticular cataracts are often radiated; the opacity appears in streaks; deep radii shoot inwards from the circumference, the centre remaining transparent; sometimes the radii begin at the centre.

It is very easy to find a rational explanation of the varieties of the hard cataract, derived from their consistence and *decourse*, if we suppose that, in the complete lenticular cataract, the molecules forming the lens be all opaque, but that these molecules are not situated at an equal distance from each other, sometimes near and sometimes at a greater distance, and often grouped differently. If those molecules are very near and close to each other in the whole extent or in some parts of the lens, the opacity will be of a darker color, a greater number of opaque molecules being conglomerated in the same space, thus augmenting there the density of the lens.

Soft lenticular cataract offers a different aspect. If we consider the opaque particles of the lens to be at a greater distance from each other, and the interstices to be filled up with a fluid (*morgagnien*), (which, according to Bowman, does not exist in the healthy lens, but is to be considered as a

he embrace new ones without careful examination; pretended improvements, be it in instruments or in a mode of operating, he neither rejects nor receives, but delights in comparing both on a large scale before he lends his support to it or pronounces his veto upon it.

* I. O., Sichel.

morbid condition), what, according to Sichel, does take place in the soft cataract, and gives it a peculiar aspect, as if their substance should contain a fluid that enlarges them, we may infer by this condition.

The anatomical character of the soft lenticular cataract.

It presents a tint lighter than that of the opaque corpuscles, which are less numerous and accumulated in the same space, but separated by a transparent or semi-transparent fluid. The antero-posterior diameter is much longer than in the hard cataract, and almost as dense in its circumference as in its centre, hence the light color; it is of a whitish or whitish blue tint, milky, or uniform grayish white; an opacity equally marked in its periphery as in its centre, or more globulous than in the lenticular form, more convex than plane in its anterior surface, so much so that it protrudes, and is often visible in profile in the pupil. Soft cataract is of considerable volume, which, pressing upon the iris, pushes it forwards, diminishing thus the capacity of the chambers, hence the diminution or absence of the shadow of the iris, a smaller or greater dilatation of the pupil, slowness in the movements of the pupil, which may be so great as to simulate amaurosis, sometimes irregularities in the pupil; the pupillary margin (uvea) is much larger and more visible in consequence of its dark color contrasted on the light color of the opacity, which begins in the external layer of the lens.

Physiological symptoms of the soft cataract.

Vision is less impaired in subdued light; a rapid dilatation of the pupil being to a great extent impossible, and the circumference of the lens almost quite as thick as its centre; errors are often committed in forming the diagnosis, and often cataract is mistaken for a complication with amaurosis; chiefly if the patients can but distinguish light from darkness, and that not always readily, in consequence of the density of the opaque mass.

This form of cataract is common in infants and children: although rarely, it occurs sometimes in elderly persons.

Sichel distinguishes, also, *half hard* and *half soft* cataracts. He calls those *half hard* ones which are more or less voluminous, and have a hard centre, surrounded by a small quantity of soft, cortical substance; whereas he designates *half soft* cataracts those which, notwithstanding the great consistency of the nucleus, the great quantity of the external layers or cortical substance, show the symptoms of the soft cataract.

The opacity of the soft cataract begins always in the external layers or cortical substance of the lens, mostly in its anterior, sometimes on its posterior surface.

Congenital cataracts, due mostly to an arrest of development of the lens, are usually lenticular; they are mostly soft, or *half soft*, or fluid.

Fluid lenticular cataract.

Fluid or liquid cataract consists in a partial or complete liquefaction of the contents of the capsule. The most frequent form of it is the *Morgagnien*.

In all morgagnien cataracts the crystalline lens becomes first opaque, and afterwards softened by imbibition of the morgagnien fluid, and perhaps of the aqueous humor also,* which penetrates, by endosmose, the capsule, and becomes completely or incompletely liquified. It becomes converted into a flocculent matter, a part of which dissolves itself almost entirely in the interstitial fluid; whereas another part, which remains suspended in it during the movements of the eye, and renders it more opaque, settles in the bottom of the capsular cavity when the eye becomes steady, and allows the morgagnien fluid to become again transparent. At such a moment, when the eye is steady, it presents different appearances, according to the complete or incomplete fluidization of the lens. If a nucleus exists in it, it is green or greenish when hard, greenish gray or grayish when its contents are half hard. We will return to this form on another occasion, when we will revert to the views of Sichel and Wilde,† both of whom have lately contributed much to the history and study of the morgagnien cataract.

If you compare the varieties of the *lenticular* cataract just mentioned, you will find them to differ from each other in their anatomical and physiological symptoms, thus:—

<i>Hard L. C.</i>	<i>Soft L. C.</i>	<i>Fluid L. C.</i>
The <i>opacity</i> usually begins in the centre of the lens, and extends to its periphery, which remains mostly transparent, and accessible to light; it is of yellowish gray or steel gray color, varying to the different tints of green and brown.	The opacity begins in the external layer of the lens, towards its centre; spots of white or bluish white extend from the surface, which the latter divide in triangles, the circumference being impermeable to light.	Opacity advancing from the circumference to the centre.
The size of the lens being small, admits of the free movements of the iris, and being a little distant from the pupil, allows a shadow of the iris to fall upon the capsule.	The size of the lens being large, it protrudes the iris, impairs its movements.	<i>Idem.</i>
The posterior chamber appears large.	Abolishes the posterior chamber. The uveal ring of the iris is visible on the gray background.	<i>Idem.</i>
<i>Vision</i> better in subdued light; seldom entirely gone.	Sight entirely gone.	<i>Idem.</i>
Its development slow and equal.	Its development sometimes slow, sometimes rapid; usually unequal.	<i>Idem.</i>

* I. O., Sichel, 7me. Livraison, 278.
† Archives d'Ophthalmologie, October, 1853, p. 166.

Capsular cataract

Is rare ; its frequency has been exaggerated by ophthalmic surgeons, who mistook spurious cataracts, or opacities situated on the periphery of the lens, for capsular cataracts. Malgaigne tried to show, by his numerous investigations of morbid lenses, and asserted,* that every opacity of the capsule disappears by washing and scraping it carefully. Sichel, however, has lately† proved the existence of a pathological change in the structure of the capsule itself ; a capsular cataract is, therefore, beyond doubt. Sichel states in his instructive and splendid work,‡ that he has been aware of this fact for several years, but that he reserved its communication, with the exception of one case,§ for this favorite publication.

Anatomical symptoms of capsular cataract.

Generally, it has a tint varying from bluish white, chalky, or pearly white, to gray, mixed sometimes with a slight yellowish tint. In the distribution of the opacity is a want of uniformity and regularity, the most abrupt transitions from one tint into another, of light into darker, are noticeable. The opacity often terminates abruptly, in half or complete transparency. The capsular cataract remains more often partial than the lenticular one : an examination, therefore, of the lens, as well as of the interior of the eye, is to a certain extent possible. The opacity is often limited to the centre of the capsule, where it forms a spot with irregular borders, which is sometimes rounded, sometimes square, and terminates abruptly. The opacity may begin on every point of the capsule ; its surface is seldom smooth ; it is almost always covered by spots, or streaks different in number and size, unequally divided, and more or less closely situated. They have different forms, and derive therefrom their names, as barred, striated, pointed, etc.

They produce thus small prominences, elevations on the surface of the capsule, which can be seen often laterally by the naked eye ; sometimes they appear like folds, chiefly when looked at by a magnifying glass, sometimes they look like raised *plaques*, vegetations elevated (*cataractes vegetantes pyramidale*). The opacity is situated behind the pupil, and it is observable that it is in front of the lens, and not in the latter. Even by a magnifying power, it is no longer possible to discern the small points or

* "Prenez une capsule chez tel cataracté que vous voudrez : lavez-la avec precaution ; vous la trouverez toujours aussi transparente que Dieu la faite."—*Gazette des Hôpitaux*, 1848, No. 140, p. 561.

† I. O., 8 Livraison.

‡ Now publishing in *Livraisons, Ic. Opht.*, Sichel.

§ *L'Esculape*, 1841, No. 9, p. 10.

opaque granules formed in the lenticular cataract by the altered molecules of the lens.

Physiological Symptoms.—Vision is impaired according to the extent of the opacity, which is sometimes near the centre, sometimes near the periphery of the lens.

Theoretically, capsular cataract may be divided in *anterior*, *posterior*, and *antero-posterior*.

A more practical base of division is founded on the causes by which they are produced; they divide, therefore—

1. *In primary cataracts*, which develop themselves spontaneously, without a previous operation.

2. *In secondary cataracts* produced in consequence of operations. To this class belongs,

3. *Traumatic cataract*, produced by external injury.

In true capsular cataract, the opacity is situated in the parenchyma* of the capsule, and not only on its surface. The protuberance is constituted out of the membrane of the capsule which has lost its transparency, and is sometimes covered by the product of the exudation.

In this form of cataract, the opacity very likely commences in the posterior surface of the capsule, and alters the structure itself, extending sometimes to its anterior surface. Sichel, however, has observed rare cases where the opacity extended from the anterior surface, where it began, through the membrane to the posterior surface; sometimes, although rarely, he met with a capsule so opaque and thickened, that it was impossible to decide where the opacity began.

The posterior capsular cataract shows the same forms as the anterior, but is more rare, and more difficult to be recognised.

* N. B. Sichel mentions a case, I. O., 8 Liv., in which both eyes were affected with cataract, the left eye presented a lenticular one, the right eye a capsulo-lenticular cataract. During the operation of the capsulo-lenticular cataract, in the moment when he intended to perform the division of the capsule, the liquid (morgagnien) cataract has been expelled, together with the capsule surrounding it, in consequence of the contraction of the ocular muscles. The capsule showed to the naked eye, and by the aid of a magnifying glass, almost in the centre of the anterior surface an opaque elevation, wrinkled in its circumference, and surrounded by linear prolongations. On the posterior surface the opacity was concave, and filled with small white protuberances. Without touching the capsule with any instrument, he sent it to Dr. Richard for anatomical and microscopical investigation. Dr. R. examined it, together with Messrs. Broca and Ch. Robin, only after it had been macerated for a few days. In spite of this long maceration, which must have destroyed the superimposed plastic layers, the gentlemen could recognise in it the altered structure of the capsule, *i. e.*, the real cataract.

The antero-posterior is difficult to diagnosticate, because the opacity of the anterior part will prevent us from ascertaining the change in the posterior.

DIFFERENCE OF CATARACT.

Lenticular.

Opacity extending from the centre to the surface, or from the surface to the centre, without any previous inflammation.

Color gray, grayish green to green, or yellowish, often presenting the color of amber, spots often broken through by streaks, converging towards the centre and smooth.

The structure of the lens may become altered by degrees in the whole extent.

Volume sometimes large as in the soft, sometimes small as in the hard form.

Iris movable or immovable, without adhering to the capsule.

Capsular.

Opacity extending on the surface of the crystalline lens, and formed sometimes in consequence of a previous inflammation.

Chalk white, or bluish white spots, formed by folds, showing rough prominences on the surface of the capsule.

The capsular often remains stationary and limited.

Volume small.

It is seldom movable, often adherent.

Capsulo-lenticular Cataract.—The opacity resulting from the morbidly altered lens and capsule constitutes the capsulo-lenticular cataract. According to the prevalence of the change in the one or the other, the peculiarities characteristic of the one or the other may be more or less recognized; sometimes, however, the combination of both symptoms will produce new appearances. The different varieties, regarding the extent, form, color, and nature of the opacity situated in the lens, as well as in the capsule, will present manifold combinations.

Sometimes a chronic and almost insensible inflammation, or, at least, determination of blood to the eye, will cause a capsulo-lenticular cataract. The partially opaque capsule may include a hard lens, which may be recognised by its color and position. Sometimes the capsule, having been the seat of long-standing inflammation, is more or less thickened and indurated, containing a soft lens. In this patient you may recognise the bluish-white, milky color of the capsule in the right eye, and distinguish the chalky appearance of the capsule in the left eye. As you hear, his right eye was first attacked about two years ago, his left one twelve months later: behind the opacity, as you can see, through some half-transparent spots of the capsule of the right eye, is a cloudy, bluish-white mass, constituting the voluminous soft lens;* whereas, the almost uniform, white, streaked appearance of the right capsule does not permit you to distinguish much of the color of the lens.

The patient, however, being 13 years of age, you may infer the lens to be a soft one, besides the volume of the lens pushing forwards, as you see, in both eyes the iris, which appears convex in front, and thus prevents its

* Enlarged by fluid.

movements and retards them; further, the black pupillary margin, distinctly visible on the white and bluish-white background of the capsule, the absence of a posterior chamber, leave no doubt of its being a *capsulo-lenticular* cataract, containing a soft lens. His mother, as you hear, dates the beginning of this affection from the time his grandfather, to whom he was very much attached, died; whether this be a mere coincidence of circumstances, or the cause of his complaint, I cannot say; but I am inclined to believe that this melancholy occurrence may have contributed to the development of the cataract, if the mental depression he experienced at that time be not the cause of it. He asserts, as you hear, that dimness came on gradually without any pains, and increased until the sight of his right eye was gone; subsequently the left eye was affected, and now he can but just distinguish light from darkness. The pupil has been dilated by atropine, and you may see now the cataract in its extent.

Careful examination is required in order to recognise cataract in its early stages; many mistakes are made in this respect, and not seldom is amaurosis or glaucoma pronounced to exist, when a close investigation proves it to be a cataract in the earliest stage: such mistakes are sometimes made in consequence of a superficial examination, and on the other hand from want of knowledge and experience in recognising similar affections at the outset, when less defined.

The pathological changes being different in cataract, amaurosis, and glaucoma, and the treatment equally so, the necessity of distinguishing those diseases from each other is obvious.

Professor Sanson, to whom the credit is due for the application of the catoptrical test introduced by Purkinje, has contributed much to the means of diagnosing and recognising those different affections.

The rays of light are partly transmitted through, partly reflected from, the cornea; when, therefore, a luminous body, for instance, a taper, is held before the eye, three reflections, or images, of it are formed. Although the more superficial one is familiar to everybody, still the deeper-seated ones require close observation, and are readily seen by some practice. You can see here distinctly the three images of the taper I hold before the eye of Dr. ———. The two erect images, you observe, are formed on the cornea and the anterior convex part of the capsule, and move in the direction I move the taper; whereas the smaller and inverted image moves in the opposite direction, between the two erect ones; the smaller and inverted image, being formed on the concave surface of the posterior capsule, is visible anterior to the second erect one, which is paler and somewhat larger, on account of its being seen through the cornea and aqueous humor; the inverted image appears much more diminished. The images will thus appear in the healthy eye.

If there exists any morbid change on or in the capsule, the lens, or vitreous humor, the images of the taper, chiefly the two posterior ones, will appear misshapen, broken up, and dispersed into an indefinite, pallid blaze; from the absence, therefore, or less complete appearance of the images, you may infer a proportionate opacity to exist in the respective surfaces. You may convince yourselves of this fact by looking into the dilated pupils of this cataract patient, you may distinguish the anterior, erect image of this taper reflected by the cornea, but neither is the second nor the third image visible; other symptoms have induced us to determine this cataract to be a capsulo-lenticular one; but you may meet with less-developed opacities of the lens, where this catoptrical test may be of some value in the determination of the affection.

In glaucomatous eyes you will also find a deviation from the normal reflection in the healthy eye.

I. In the incipient stage of glaucoma, the deep, erect image, and the inverted one, is visible, although the outline of the deep, erect one remains sharp; still, its size is larger and brighter than that in the healthy eye.

II. In the second degree of glaucoma, the inverted image is distinct in the circumferential part of it, and becomes less so, and sometimes even entirely extinguished, in the centre of the lens, chiefly if there coëxists a lenticular opacity.

In the III. and IV. degree the deep erect image is larger and better seen than in the healthy eye. If you look into the glaucomatous eye of this woman, you will recognise, without difficulty, the second inverted image of the taper I hold before it, and if you compare it with the image formed in the capsule of the healthy eye of this lad, you will find it much larger in size, although blazing and less defined. The sea-green color situated deep behind the lens and visible only in front, and not from the side; further, the morbid alteration of the choroidea, whose transparent, tortuous, and enlarged vessels appear through the sclerotica; and the complaint of violent pains over the eyebrows,—leave no doubt of its glaucomatous character.

Hays, of Philadelphia, whose sound judgment and great experience as an ophthalmic surgeon, entitle him to the reputation he enjoys as such, in this country as well as on the European continent, bears testimony to the efficacy of this catoptric test, and adduces, in his instructive additional notes to Lawrence's Treatise on the Diseases of the Eye, two interesting cases, in both of which he was enabled to form a correct diagnosis only by the use of this test.

However, this test, although valuable, is not sufficient to guide the

ophthalmic surgeon in determining the morbid alterations of the interior parts of the eye, various contrivances have been made to examine the interior of the eye, all of them are founded on the principle of throwing reflected light through the pupil in its interior.

Of the specula you see here, this one was invented by Helmholtz, and this by Coccius, of Leipsic. Dr. Klaunig, of Leipsic, has lately introduced a more practical one. With their construction and use I will make you acquainted in the next lecture.

Aneurism of the Aorta, bursting into the Pericardium. By D. S. CONANT, M. D., Demonstrator of Anatomy in the New York Medical College.

In the March No. of the London Lancet, page 236, will be found a report with the foregoing title, made by William Henry Bellot, F. R. C. S. E., Surgeon to the First Regiment Chelsea Militia. During the past winter I made a postmortem examination for Dr. S. P. White, and found the pathological condition of the organ implicated, to correspond so nearly with the description given by Mr. Bellot, that I thought a detail of the case might not be altogether uninteresting to the readers of the MONTHLY.

I made the autopsy on the 23rd day of January, 1854, nineteen hours after death, assisted by Dr. White, Prof. Peaslee, and Dr. J. S. Owen, and in the presence of other gentlemen of the profession.

The subject had been a merchant of this city, fifty-four years of age, weighing about 180 lbs. He had always been extremely moderate as to his diet, and had never taken much exercise. In 1824, he suffered from a very severe attack of inflammatory rheumatism, and experienced a slight recurrence in the spring following; but was free from the disease until some four or five years since, when he had an attack of rheumatic gout in the hands, feet, neck, and stomach: the pain changing its location from one to the other of these different points.

For the past two years he has been entirely free from all these pains, but has complained of uneasiness about the heart, which seemed to indicate merely a change in the location of the disease. At first the paroxysms were not frequent, but gradually increased in frequency until he would have three or four in the course of a week, and generally occurring in the evening. During the last two or three months of his life, they increased very much in violence, as well as frequency. He also complained of pain resembling colic, in the stomach, which was attended with nausea, and followed by considerable tenderness in the epigastric region, which always left him very much prostrated. His nights became more and more sleepless, and he often spoke of a suffocating feeling which awoke him, and

from which he found relief in getting up and walking the room. When attacked with nausea he expectorated a quantity of frothy matter, occasionally tinged with blood. At the commencement of his severe attacks the face became quite livid, the natural color gradually returning. These paroxysms were also accompanied with numbness of the left arm.

On the evening of his death, he was in the parlor, with his wife and friends, when suddenly, while laughing, he coughed once or twice, sprung for the window, and dropped dead.

Autopsy. Upon opening the thorax the lungs were found to be healthy, with no pleuritic adhesions of any account. The pericardium seemed to lie directly upon the heart; but upon carefully cutting through the membrane, the serum spirted from the first small opening made, to a distance of several inches: showing that there was considerable pressure within the pericardium, which accounts for our not detecting the fluid before opening it. The heart was completely enveloped in a coagulum, which, when removed, together with the serum, measured twenty-two ounces. Upon examining the aorta, we found an aneurismal sac about the size of a very large lemon, oval in shape, extending from the aortic valves to the origin of the left subclavian artery. The coats of the sac internally, as well as of the thoracic aorta, and the commencement of the branches of the arch, were completely infiltrated with atheromatous deposit. After considerable search the opening was found, which was about three-eighths of an inch long, and at right angles with the course of the blood, communicating with the pericardium, about an inch and a quarter from the aortic valves, just as the aorta rises above the right auricle, the auricular appendage to the right auricle acting as a valve to the opening. Hence the great pressure within the pericardium, without regurgitation into the aneurismal sac. In fact, I look upon this pressure as the direct cause of death, preventing, as it would, entirely, the diastole of the heart. The heart, together with the aneurismal sac, weighed twenty-eight ounces and a-half, the walls of the left ventricle were about three-fourths of an inch in thickness, and the septum between the ventricles about seven-eighths. The normal weight of the heart and the aorta to the left subclavian, would not be more than ten ounces. Hence we have in this case almost three times the normal size of the organ, showing that the disease must have been of long standing, and the coats of the aorta thick and resisting. The stomach was of normal size; but the mucous membrane was somewhat softened, and presented a peculiar, mottled appearance, such as I have never seen before. What this appearance was owing to, I am not able to say.

176 *Third Avenue.*

PART II.—REVIEWS AND BIBLIOGRAPHY.

Prize Essay on the Use and Abuse of Alcoholic Liquors, in Health and Disease. By WM. B. CARPENTER, M. D., F. R. S. With a Preface, by D. F. CONDIE, M. D., &c. Blanchard & Lea, 1853. 1 vol. duodecimo, pp. 178.

This volume contains the conclusions arrived at by one of the most distinguished of living physiologists, in respect to the effects of alcoholic liquors in health and disease; and, as such, demands the attentive consideration of all medical men. The author has never allied himself with any Temperance Society, so called; has treated the subject as one of "purely scientific inquiry; and has avoided mixing up any other considerations with those which presented themselves to him as a physiologist and a physician."

We are therefore bound, as medical men, to examine his conclusions without prejudice, and in the scientific spirit in which they are proposed.

It was the condition imposed by the donor of the prize, that the Essay should contain answers to the following questions:

"1st. What are the effects, corporeal and mental, of alcoholic liquors on the healthy human system?"

"2d. Does physiology or experience teach us that alcoholic liquors should form part of the ordinary sustenance of man, particularly under circumstances of exposure to severe labor, or to extremes of temperature? Or, on the other hand, is there reason for believing that such use of them is not sanctioned by the principles of science, or the results of practical observation?"

"3d. Are there any special modifications of the bodily or mental condition of man, short of actual disease, in which the occasional or habitual use of alcoholic liquors may be necessary or beneficial?"

"4th. Is the employment of alcoholic liquors necessary in the practice of medicine? If so, in what diseases, or in what forms and stages of disease, is the use of them necessary or beneficial?"

These questions implying a full consideration of the ordinary use of alcoholic liquors, as well as their medical administration, the author has answered them in the order just given, devoting a chapter to each.

I. In the first chapter, on the effects of alcohol upon the healthy human body—he discusses its effects in corrugating the tissues, coagulating albu-

men, in impairing the solidifiability of fibrine, in producing irritation of the living tissues, in causing a temporary exaltation of the nervous power; and in respect to the changes it produces in the red corpuscles of the blood.

2. He then considers the effects of alcohol on the system at large; giving the phenomena of alcoholic intoxication; the symptoms, and the post-mortem appearances, of alcoholic poisoning; and the pathology of intoxication.

3. In the 3d section, we find an account of the diseases produced by the excessive use of alcoholic liquors. Those of the *nervous system* are, delirium tremens and ebriosum, insanity, oinomania, mental debility in the offspring, inflammatory diseases of the brain, apoplexy, paralysis, and epilepsy. Of diseases of the *alimentary canal*, the author mentions irritation and inflammation of the stomach, dyspepsia, and disorders of the mucous membrane of the intestines. Diseases of the liver, skin, and kidneys, are also thus produced. General disorders of nutrition are also specified, as a tendency to deposition of fat; diminished power of sustaining injuries by disease or accident; liability to epidemic diseases; gout and rheumatism, and diseases of the heart and arteries.

4. The general effect of the excessive use of alcoholic liquors in shortening the duration of life, is proved by the foregoing list of diseases thus produced; but more directly, also, by the experience of life insurance offices, and by statistics respecting the natives and the Europeans in the Indian Army. "No life insurance office will accept an insurance on an individual whose habits are known to be intemperate; and if it be discovered, after his death, that he has been accustomed to the excessive use of alcoholic liquors; contrary to his statement in his proposal for insurance, the policy is declared void." (pp. 71, 2.) It appears that nearly three times as much sickness occurs among those soldiers serving in India who are not, as among those who are, members of temperance societies.

II. In the second chapter, the author shows that the power of endurance of bodily and mental exertion is diminished by alcoholic liquors. The effect of abstinence in sustaining the mental powers, has been well illustrated in his own case; he having performed an astonishing amount of labor as an author and physician, for several years past; and having been in a better condition without alcoholic drinks than when using them sparingly.

The power of enduring cold and heat, and of resisting morbid agencies, is also shown not to be increased by these liquors, as is generally, but erroneously, asserted by those addicted to their use. They produce a *temporary* augmentation of temperature, if taken into the stomach while fasting; but it is shown that a meal of wholesome food, containing some proportion

of oleaginous elements, has still greater and far more permanent calorific effects.

The last section in this chapter discusses the consequences of the habitual "moderate" use of alcoholic drinks. Speaking of its effects on the general system and excretory organs, he holds the following language :

If the natural appetite be already good enough to give a relish to the food which the system requires, can the artificial production of an increased appetite be necessary or desirable? And if the stomach be already capable of digesting and preparing as much nutriment as is required to keep up the solids of the blood to their proper amount, can any but prejudicial consequences result from forcing it to dispose of more? (pp. 123, 4.)

Every educated medical man must, of course, feel bound to answer these questions in the negative. And no such man can avoid the conclusion at which Dr. Carpenter arrives, after considering these effects upon the stomach, the nervous system, the circulation, and nutrition, that "the habitual use of alcoholic liquors, in moderate, or even in small quantities, is not merely unnecessary for the maintenance of bodily and mental vigor, but is even unfavorable to the permanent enjoyment of health, even though it may for a time appear to contribute to it." (p. 137.)

We especially commend *this* part of the work to those of our profession, who, by their example, encourage the habitual use of this class of beverages ; since we have never met with a professional brother who himself used them otherwise than "*moderately*."

III. In the third chapter, the author considers the third question, before mentioned. He admits that, in some emergencies, and where a single great effort is to be made, alcohol may prove a stimulus capable of aiding in securing the result. That its use is not, however, the best method of securing the result, in such cases, is shown to be the general fact. The secondary injurious effects are also experienced in these, as well as in other circumstances. The author does not deny that in some exceptional cases of debility of the stomach, or other weakness in old age, some benefit may be permanently derived from alcoholic drinks in small quantity ; but states the impossibility of deciding, *a priori*, in favor of such a practice in any given case, and warns against the danger of adopting it.

IV. The author answers the 4th question in the affirmative ; and in the fourth chapter mentions the morbid conditions in which alcoholic drinks may be administered *medicinally*.

We think his conclusions generally correct in this chapter ; though we might, in some instances, adopt other remedies instead, to accomplish the same object. But we can hardly conceive any conscientious practitioner to be in danger of running into excessive alcoholic medication, who pos-

sesses the knowledge of the effects of alcohol upon the living organism which Dr. Carpenter has communicated in the three preceding chapters; since he would feel bound to exercise the same care in the discriminating selection of the appropriate cases for its use, "as would be taken by the conscientious practitioner in regard to the administration of any other powerful remedy, which is poisonous in large doses."

Nor do we, as medical men, see any way of escape—if any are inclined to do so—from the following *practical* conclusion.

Consequently it is the duty of the medical practitioner to discourage, as much as possible, the *habitual* use of alcoholic liquors, in however "moderate" a quantity, by all persons in ordinary health; and to seek to remedy those slight departures from health, which result from the "wear and tear" of active life, by the means which shall the most directly remove or antagonize their causes, instead of by such as merely palliate their effects. (p. 19.)

And "no medical man can any longer plead the *singularity* of the total abstinence creed, as an excuse for the non-recognition of it; and although a certain amount of moral courage may be needed for the advocacy and the practice of it, yet this is an attribute in which the Author cannot for a moment believe his brethren to be deficient." And a certificate, recognising the duty of total abstinence, had actually been signed, three years ago, by upwards of two thousand British physicians of "all grades and degrees, from the court physician, and leading metropolitan surgeons, who are conversant with the wants of the upper ranks of society, to the country practitioner, who is familiar with the requirements of the artizan in the workshop, and the laborer in the field."

In our own country, medical men have taken the lead in advocating this principle; and we do not perceive that any moral courage is necessary in continuing such efforts, and inculcating such principles, in connection with this important subject, which some of the fathers in the profession years ago commenced, and showed it to be our duty to inculcate. On the other hand, it implies an ignorance of the subject, unpardonable at the present day, to deny the advantages of total abstinence to all persons in health—whatever our own habits in this respect may be. We hope every medical man, who still makes such a denial, will lose no time before perusing this work.

Dr. Condie has rendered the work intelligible to the general reader, by the definitions of the technical terms, which he has added at the bottom of each page.

We therefore unqualifiedly recommend the work to all who would acquire a knowledge of the ruinous effects of alcoholic drinks upon the physical, intellectual, and moral energies of the human organism.

Essay on the Mechanism and Management of Parturition, in the Shoulder Presentation. By WM. BOLING, M. D., of Montgomery, Ala.

We believe it was Sidney Smith who said that a reviewer ought not to read the book which he is to review, because it might prejudice him. We have read and re-read this essay, and find it worthy of something more than a mere notice. We shall give a full review of it in our next number.

B. F. B.

Professional Letters from Europe, written during the summer of 1852, by the ASSISTANT EDITOR of the Nashville Medical and Surgical Journal.

These letters, by Prof. Paul F. Eve, were written during the summer of 1852, and published at the time in the Nashville Journal. They have now been republished in a pamphlet, for the "new subscribers" of this Journal. We think the "new subscribers" of this excellent and spirited Journal will get the full worth of their money without this additional attraction. In forty-five pages, Prof. Eve gives a vast deal of interesting information, to those who are familiar with the ground, as well as those who are not, and this, too, in a most agreeable and lively style. We are tempted to quote freely for our journal, but we must content ourselves with the following extracts :

Cause of Goitre.

This subject has claimed the attention of the Sardinian, the Swiss, and French governments, and reports have recently been made by commissioners, leading to some interesting sanitary conclusions regarding the prevention of goitre. The most important of these is the one laid before the authorities of France. In this *republic!* (empire to-day, and no one can tell what it may be to-morrow) there are 450,000 goitred subjects, and about 35,000 cretins. The first conclusion arrived at by the commission is, that this affection "depends on the presence of magnesia in the food or drink, joined with the absence of a sufficient quantity of iodine to serve as an antidote." They declare these two conditions essential to the development of the disease.

In every locality where bronchocele prevailed, *magnesia* also abounded; and there are certain districts, where young men, to escape the conscription, produced this deformity by drinking large quantities of magnesian water. By substituting rain water for that of the locality, it completely disappeared. Another important fact is, that the introduction of a certain portion of iodine into the system, either in food or drink, acts as a preventive to goitre. By adding hydriodate of potash to the daily nourishment of the inhabitants, the affection has been banished at the end of a few months. The annual expense of about 1,500 dollars for iodine, it is calculated, if properly distributed, will absolutely prevent the future development of goitre in France.

In confirmation of the views of these reports, the fact may be mentioned, that at Geneva, strangers are invited to visit the commingling of the waters of the Rhone and Arn, just below that city. The color of one is blue, the other *whitish*. The river Arn has its source at the *Mere de Glace*, near Mont Blanc, and runs through the most thorough *magnesian* formation I have ever seen; and in its valley goitre prevails to an almost incredible extent. Another recent fact may be given: the inhabitants of a certain village hitherto exempt from goitre, became affected with this deformity. A factory having been erected near it, the mountain stream which had supplied them with water, was diverted from its natural course to become its motive power. Wells were now resorted to; goitre at once commenced. The running water was again brought into the village, and it disappeared. An analysis of this local water proved it contained *magnesia*.

The results above mentioned by the commissioners appointed by these governments are highly interesting, and if confirmed by future observation, will redound to the credit of our noble profession, and exemplify her triumphs over death, disease and deformity.

Visit to Professor Simpson, the Introducer of Chloroform.

I have had the enviable privilege not only of making his acquaintance, but have seen him *operate after administering chloroform*. Having visited the Edinburgh University, then Herriot's, Dawson's, and Donaldson's magnificent hospitals, each of these founded by the munificence of individuals bearing these respective names, I next sallied forth to call upon Professors Miller and Simpson. The first-mentioned was out of town, but the latter I found in the midst of his patients. He promptly acknowledged my feeble contributions to the early introduction of his special anæsthetic agent in our country, and invited me into his private operating room, to reach which we had to pass through *two stories of women*, in attendance upon the consultation of the Doctor. There were three other professional gentlemen with him; one, Prof. Retsius, of Stockholm, Sweden. He is the professor of Obstetrics, and is brother to the distinguished professor of Anatomy. He, too, had come to visit the great Scotchman, who has the honor of having given to the world the best of all anæsthetic agents.

Amenorrhœa—one certain emmenagogue.

Professor S. has just operated upon a case, that of cupping directly the uterus for amenorrhœa. The fluid extracted was subjected to the microscope, and exhibited *blood-corpuscles* as well as those of epithelial cells in the mucus. This method to bring on menstruation is resorted to when other means have failed, and is only adapted to a certain number of cases. A stem pessary he also frequently employs, composed for this particular purpose of two metals, say zinc and copper, or silver, so as to excite galvanic action. These instruments are generally made of German silver, are of oval shape, of about one and a-half by two and a-half inches in size, and from their centre projects, at a right angle, a stem of two inches in length. To introduce this pessary, the stem is placed flat upon the body of the instrument passed into the womb, and then by a spring maintains its posi-

tion in this organ, while the whole is retained in the upper portion of the vagina. I saw one removed that had been worn ten months without inconvenience, but on the contrary, with advantage. No difficulty is experienced in wearing them. Should the ordinary treatment for amenorrhœa fail, and galvanism produce no effect when applied as described, then, as the *dernier resort*, a long catheter is introduced into the womb, and a suction pump adapted to its external extremity. This is the direct cupping of the uterus, and is surely one certain emmenagogue. Of course, if the ovaries are at fault, nothing can re-establish menstruation; hence I have stated this heroic measure, the immediate action upon the womb itself must be applicable to only a limited number of cases. The sudden congestion of this organ by this means must often result in the irruption of the menses, and may be added to our means to effect this end.

Retro-version and retro-flexion of the uterus.

For these, Dr. Simpson relies on his stem-pessary. In a case just arrived from Aberdeen, the patient was placed deeply under the influence of chloroform, the misplacement clearly ascertained, and as the os tincæ would not admit the stem, it was freely incised in opposite directions. The patient was to return in a few days to have a pessary adapted to her case. I was much surprised at these bold operations upon the womb, and they go far to establish the position of Jobert, of Paris, that the os tincæ is insensible. The instrument of Prof. S. for stricture of these parts resembles the lithotome caché, the handle being much longer.

False Conception—Is readily detected by the relaxation produced in the abdominal muscles from the effects of chloroform.

Prof. Simpson's mode of administering Chloroform.

He poured on a towel about half an ounce of this fluid, and applied it closely to the nose and mouth of the patient. It was there retained, say about two or four minutes, until the patient had passed into stertorous breathing. Indeed, it seemed to be recklessly administered, so obviously was confidence placed in its harmlessness.

Everything that I saw of Prof. S. during this brief visit, impressed me with the sound philosophy and great worth of the man. He is in my estimation justly entitled to all the honors bestowed upon him by his professional brethren throughout the world, and has conferred an inestimable boon on suffering humanity. To him, and to him alone, belongs all the praise of introducing the best anæsthetic yet known in the practice of the healing art.

Prof. Simpson is about fifty years old, is a short, stout built man, with broad shoulders, short neck and large head, covered with a profusion of dark colored hair, which he wears quite long. It was 4 P. M., when I called upon him, and found his house then thronged with female patients, not less than sixty, I should think.

I find Prof. Channing, of Boston, also visited Edinburgh about this time, and sets down the number of patients he saw at Prof. Simpson's at ninety.

PART III.—CHRONICLE OF MEDICAL PROGRESS.

[The abstracts and translations found under this title are made expressly for the
AMERICAN MEDICAL MONTHLY.]

Histological Researches made upon the corpse of a suicide. By A. KÖLLIKER.

The corpse of a young female found in the Maine, whose internal organs were yet very fresh and well preserved, gave the author an opportunity for the following investigations.

The smooth, that is, not mamelonnated, gastric, mucous membrane, was of a lively gray-red to a rose-red color, with the exception of two strips at the cardia and pylorus, at the latter of which the epithelium was also still preserved; of the glands of the stomach, the author could distinguish three forms tolerably definite:

1. *Simple follicular glands with stomach cells.*—They are the most frequent, and are found in the middle zone, of a lively, red color; although they not very rarely exhibit short blind dependencies, and divisions at their blind extremity, yet by far the greater number of them are simple; botryoid glands do not occur at all in this region. The follicles never contain cylinder epithelium, but stomach cells.

2. *Compound follicular glands with stomach cells*, at the small, pale cardiac zone. The author describes these as beginning with a passage destitute of cylinders, from 0.04 to 0.08 of a line in length, and 0.03 to 0.04 in breadth, which almost as from one point divide at first into two or three, and then into from four to seven, tolerably equal, long, cylindric follicles, filled or lined with stomach cells (Labzellen).^{*} Their terminal follicles also often show numerous simple diverticula, and in the stomach cells often small, fat globules. Together with these glands are found also, but in smaller number, simple, but nowhere acinous glands.

3. *Compound follicular glands, with cylinder epithelium*, at the pyloric zone; like the previous form, except the greater follicles and the want of stomach cells. Here, also, are no genuine botryoid glands, as Ecker maintains.

With Donders, the author divides the glands of the human stomach into two species; those secreting the gastric juice and mucous glands. Between the first he found, perpendicularly ascending, bundles of contractible fibre cells; but no circular or spiral fibre cells, as Ecker found.

^{*} See Editorial Comment.

In the *intestine*, the muscular fibres, especially of the broader villi, were to be seen very evident and beautiful; they extended from these into the depth of the mucous membrane, and were in direct relation with its muscular couch. The little nuclei of the villous parenchyma, although many of them are entirely free, the author is inclined to dispose (with Virchow) in small, round cells, which may be transformed to pigment cells. The chyliiferous vessels of the villi could not be recognized; in the well-preserved epithelial cells, no openings were to be discovered, although Brücke has of late asserted them to be constant. The contents of the cylinder cells of the intestine is mucus. In the solitary follicles of the large intestine, as well as in Peyer's patches, the author could demonstrate a very beautiful capillary net-work.

In the extremely well-preserved *spleen*, the author discovered, what he had hitherto succeeded in doing only in cats, the presence of blood-vessels within the splenic vesicles. From these observations, however, he cannot as yet determine a connection of the Malpighian corpuscles with lymph vessels. The peculiar, fusiform cells of the pulp, compared by him originally with muscular fibres, appeared mostly with laterally-adhering nuclei, and indeed in an increasing manner upon the decomposition of the organ. It seems, therefore, probable to the author, that these belong to the vascular epithelium (Günsburg). Blood-corpuscles containing cells, altered free blood-corpuscles, and extravasated blood of any considerable amount, were not perceptible in the splenic pulp. The venous blood of the spleen contained many small, uni-nucleated cells, not larger than blood globules. In this examination, Kölliker found no further ground for his well-known hypothesis, viz. that the blood-corpuscles are destroyed in the spleen—from the frequent presence in the pulp of blood-corpuscles in process of decomposition.

The *tonsils* and *mucous envelopes of the tongue* appeared also to contain vessels in the interior of their follicles.

The more exact examination of the *genitals* was referred to Prof. H. Müller.—*Schmidt's Jahrbücher*, Feb., 1854.

PATHOLOGY.

Contributions to the knowledge of tumors within the cranium.

Dr. N. Friedrich, of Würzburg, in a very valuable paper, gives the details of eleven cases of tumors within the cranium observed by himself, clearing up much of the obscurity in this part of cerebral pathology. The history of each case is accompanied by the *post-mortem* results, and by a

clear and intelligible epicriticism. In the second part of the paper he sets forth the well-known, manifold differences of symptoms which cerebral tumors and pathological conditions within the cranium usually determine. The causes of this great variableness the author places partly in the locality of the disease (according as this attacks more or less important parts), partly in the time of duration within which the tumor is developed (since smaller but rapidly-growing tumors for the most part call forth more violent phenomena, than larger but slowly-increasing ones); partly, also, to the account of individual peculiarities (greater or less excitability of the patient, &c.). In order to determine more exactly the frequency and the diagnostic value of the particular symptoms occurring in consequence of tumors within the skull, the author selected from medical literature, thirty-four cases which had not hitherto been applied to similar comparisons; and from these, together with ten of his own cases, derived the following results:

1. *Disturbances of Sensibility.*—Headache is the most constant symptom of cerebral tumors, and commences mostly in the earliest periods of the disease. Out of the above forty-four cases it existed generally thirty-eight times, and once as the most prominent symptom; it was wanting in only six cases, and in two of these the tumor was symptomless. For the most part (twenty-four times out of thirty-eight cases) headache was the initiatory symptom of the disease, and continued isolated in eighteen cases, until the occurrence of new phenomena; and in six cases remained the only important symptom until death. In ten cases, headache was present from the beginning, but other symptoms also existed simultaneously. Only four times the headache first came on in the course of the disease (three times subsequent to giddiness, once to disturbances of vision). Out of the eighteen cases in which the headache existed isolatedly until the occurrence of new phenomena, three times it continued alone for six months, fifteen times during various periods (six weeks to ten years). The headache was mostly intermittent and paroxysmal, rarely continuously remitting, only in a few cases continuous. Sometimes the intermitting headache was repeated in typical paroxysms. Its quality was various. Its exacerbations occurred sometimes in different positions of the body, from strong movements, from constipation, before menstruation, from change of weather. Sometimes it was in the beginning more general, and afterwards became concentrated upon a definite point of the skull; sometimes it wandered. In rare cases, two distinct points of pain were indicated upon the skull. The seat of the pain in the head possesses only limited value for the diagnosis of the seat of the new formation; frontal headache, however, appears in general to accompany tumors of the base, whilst occipital headache and pain in the neck appear most frequently to attend tumors of the cerebellum and posterior

lobes of the cerebrum. From cephalalgia of one side, we cannot with certainty, but may with probability, conclude upon a tumor of the cerebral hemisphere of the same side. The causes of the headache existing in the beginning of the disease, produce disturbances of the normal nutritive processes of the nervous substance; later, the neoplasm itself has its effect upon the origin of the headache, from gradual increase of size. *Giddiness* was sometimes first associated with paroxysms of headache, at other times it existed as the first symptom in the place of headache, and in paroxysms throughout a longer period. The remaining disturbances of sensibility, titillation, formication, and numbness of greater or smaller portions of the body, mostly with succeeding anæsthesia, pains which afterwards were also either followed by simple anæsthesia, or the so-called anæsthesia dolorosa, &c., have less symptomatic value. Sometimes the increased sensibility of parts extended from above downwards. In those cases where the sensibility of one half of the face was impaired, a tumor was not unfrequently found at the base of the cerebrum, which pressed immediately upon the trunk of the trigeminus: simultaneous disturbances of the motor part of this nerve were but seldom present in such cases.

2. *Disturbances of motility* existed thirty-one times out of forty-four cases; sometimes only in one or the other form; mostly, however, the particular forms were combined in a manifold manner.

a. Paralytic conditions were found in the most different degrees; from slight heaviness of motion to complete paralysis. For the most part, the latter arose gradually out of the former; paralysis but seldom occurred suddenly, and then other cerebral disturbances always preceded it. The paralysis continued limited to one half of the body in fourteen cases, and but rarely (four times) attacked both sides. In three cases in which tumors were found at the base of the brain, complete paraplegia existed. Several times an oscillatory, increasing paralysis was observed. When hemiplegia was developed gradually, it progressed from above downwards in all the cases described in detail, so that first the arm then the foot became paralytic. Paralysis of one side of the face occurred mostly earlier, at times, however, later, than that of the extremities. Twice, the side of the face and the upper extremity of the same side were paralysed; once, facial paralysis of one side was connected with paralysis of the lower extremity. One-half of the face and the extremities of the other side are paralysed, especially from tumors upon one side of the base of the brain, and then in almost all cases the extremities of the side opposite the neoplasm. In those cases where the face and extremities of the same half of the body were paralysed, the tumor was usually seated within the hemispheres; sometimes upon the same side with the hemiplegia, sometimes upon the opposite. The articulating *movements of the tongue* were impaired in twelve cases. In six cases, the protruded

tongue took an oblique position; three times this coincided with paralysis of the hypoglossus. Once the oblique position of the tongue upon protrusion had already existed a long time, and afterwards came on disturbances in the articulation of words; once the reverse of this took place; once the tongue was distorted without the cavity of the mouth, but not accompanied by disturbance of speech. In those cases where, in consequence of paralysis of the hypoglossus, the protruded tongue assumed an anomalous position, its point was always directed towards that side upon which the facial, and in general also other cerebral nerves, were paralysed. The position which the tongue takes within the buccal cavity from paralysis of the hypoglossus, and that which it assumes upon protrusion, have different causes. The first position, in which the base of the tongue stands deeper in the buccal cavity upon the paralysed side, is dependent upon a paralysis of the nervous branches going to the M. styloglossus and hyoglossus given off from the hypoglossus; perhaps, also, at times, of those of the M. styloglossus alone. Those cases, on the other hand, in which the tongue lies straight within the buccal cavity, but upon protrusion deviates with its point towards the paralysed side, have their origin in an isolated paralysis of the branch of the hypoglossus going to the M. genioglossus. Both conditions may occur isolatedly, but are frequently combined. The position of the *uvula* was not mentioned in most of the cases. In his own cases in which there was facial paralysis, the author found it sometimes directed towards the paralysed, sometimes towards the unparalysed side. The mechanism of the first and most frequent condition, the author cannot in any manner explain; the direction of the uvula towards the sound side may depend upon the unilateral action of the muscles of the velum palati. In central facial paralysis, the uvula not seldom retains the normal position. In facial paralysis, the existing or wanting participation of the uvula furnishes no diagnostic criterion of either central or peripheric paralysis. The author further asserts that the positions of the soft palate are not in all cases diverted by paralysis of the facialis; but that, moreover, the motory fibres of the third branch of the trigeminus, the vagus, the glosso-pharyngeus, and the accessory of Willis, have also their influence upon them. Besides, we find at times in the healthy an oblique position of the uvula, which depends upon a tough mucus which is found in the angle where the uvula and anterior palatal arch unite, but which disappears after some respiratory movement or effort of coughing made by the individual. A paralysis of the *muscles of deglutition* was found in seven, of the *sphincters of the bladder and rectum* in eleven cases. All these paralysees occurred for the most part in the last stages of life. Only once a relaxation of the sphincters existed alone without other paralytic phenomena. The remaining disturbances of motility

(convulsions, contractions, rigidities), were present twenty-three times in the forty-four cases.

b. Convulsions were at times almost the only symptom of cerebral lesion. They sometimes existed only as slight startings of one extremity or side of the face, sometimes they extended over one half of the body, sometimes over the whole body. They always occurred in paroxysms, at first with greater, afterwards with lesser intervals. They occurred sometimes without motory paralyses, sometimes with them, sometimes they preceded the latter. Sometimes they attacked the paralysed, sometimes the sound side of the body, sometimes they progressed from the former or the latter to the other side, and became general. Convulsions have their origin sometimes in the tumor itself, sometimes in an associated inflammatory or other condition of the brain and its envelopes. At times it has been observed in general convulsions, that particular parts of the body were attacked in a stereotype succession. In the forty-four cases *contractions* were found only six times. They always followed upon already existing paralytic phenomena, and formed the concluding symptom of the disease. *Stiffness* and *rigidity* of the limbs were present in five cases, and with the exception of once case, constantly accompanied by other preceding or succeeding disturbances of motility. Three times all the limbs were affected, once only the arm, one case was opisthotonic.

3. *Disturbances of the organs of sense* were found, generally, twenty-six times out of the forty-four cases. Disturbances of the function of vision were present in twenty-five cases, twelve times existing alone, thirteen times connected with other disturbances of sense (hearing, taste, and smell). Eighteen times these disorders affected both sides, seven times only one. In the first, both eyes did not participate at once, but successively and in unequal degree, and complete blindness came on later; in almost all these cases tumors existed at the base of the brain. In the cases of unilateral disturbance of vision, the tumor was seated in various parts. The visual disorder was present almost in all cases as amaurosis, and indeed from simple hebetude of vision to complete blindness of one or both eyes. Mostly, the obscuration of vision was developed gradually, and came on suddenly but twice. Four times, there was double vision; among these, once, diplopia merely of one eye, once periodically-occurring double vision. Strabismus was noted in nine cases, four times divergent and five times convergent strabismus. Squinting was seven times accompanied by other disturbances of vision. Ptosis was an occasional attendant (three times). In the four cases of double vision, strabismus existed simultaneously twice, once became afterwards associated, and once every disturbance of motion was wanting. Mention is rarely made of the pupils; eight times they were dilated, once contracted, and once one of them was irregular. The *hearing*

was eleven times affected, and, one case excepted, always in connection with disturbances of other senses; eight times were found different degrees from hardness of hearing to deafness of one, rarely of both ears, five times ringing in the ears (twice with hardness of hearing). The sense of *smell* suffered in four cases; three times complete loss, once abnormal odors. *Taste* was altered in five cases; four times it was wanting, once obtuse. Out of the nine cases in which there was derangement of smell and taste, a tumor was found in eight at the base of the brain. Disturbances of the senses were the primary symptoms of the disease in fifteen cases.

4. *Disturbances of the psychical functions* were found nineteen times (among which, however, are not reckoned the transient loss of consciousness which happens at times in violent paroxysms of headache or in convulsive attacks, nor the psychical disturbances occurring in the last days of life, as delirium, confusion, sopor), mostly in manifold complication and succession, usually after disturbances of sensibility and motility had preceded a long time. Disturbance of memory occurred eleven times, and was generally the earliest psychical alteration. A prostration of all the powers of the mind occurred ten times. Three patients exhibited a peculiar silly, childlike behavior, seven an exalted psychical irritability, psychical jactitation, fantastic ideas. Real madness was observed six times, but always only paroxysmal. In the whole nineteen cases, a remission, at times even an intermission of the psychical alterations was worthy of remark. To these nineteen cases, may be added four others in which lethargic conditions had existed previous to the last periods of life.

5. *Disturbances of digestion, of the circulation, and of nutrition.*—*Vomiting* occurred in seventeen cases; in fifteen, bilious, once mucous matters, once the *injesta* were ejected. The vomiting frequently attended paroxysms of headache, which, especially in the beginning of the affection, were often thereby diminished, or even entirely ceased. *Constipation* was very frequently present, which sometimes came on in the beginning, but generally after the farther progress of the disease. It, for the most part, aggravated the cerebral phenomena. *Diarrhœa* was rare; once alone, twice alternating with constipation, once an occasional bloody stool. The *appetite* was mostly normal, four times abnormally increased. The *circulation* remained mostly normal; sometimes the contractions of the heart were accelerated during paroxysms of headache; three times the frequency of the pulse was below the normal standard. Towards the end of the disease, febrile movements were not uncommon. Once, unrhythmic contractions, and palpitations of the heart occurred early. The *general nutrition* suffered in the highest degree in cases of cancerous and tuberculous, not seldom, also, of sarcomatous tumors. Once there was general excessive

development of fat. In three cases there was local disturbance of the nutrition of the eye.

The *progress* of tumors within the cranium was always *chronic*. Out of thirty-nine cases, the lesion in eight cases lasted from seven weeks to six months; in eight, from six to twelve months; in six, from one to two years; in nine, from two to four years; in eight, from four to fourteen years. Twenty-three months was the mean, if we omit the four longest cases (eight to fourteen years' duration). The author found eight and a-half months the mean of ten cases of tubercles of the brain.

The *general diagnosis* of cerebral tumors is based 1st, upon the existence of one or more of the symptoms mentioned, viz., headache, disturbances of motility and of the senses; 2d, upon the gradual succession of these symptoms, upon the length of time which, for example, intervenes between the headache as an initiatory symptom, and the later expressed disturbances of the motility and sensibility of peripheric parts. Only in four cases did hemiplegic phenomena occur with a shock; and in these a long-continued headache had in three cases preceded, once prosopalgic symptoms. Especially important to the diagnosis of cerebral tumors is 3d, the remission and exacerbation of the various symptoms.

Special diagnosis in reference to the seat of tumors.—(a.) *Tumors of the hemispheres of the cerebrum* (eighteen cases) were characterized by the following symptoms: obstinate headache in fourteen cases, in nine of which was associated ringing of the ears or vomiting; disturbances of motility fourteen times, being convulsions thirteen times; hemiplegia occurred five times, sometimes crossed, sometimes not; anomalies of the functions of sense ten times, seven times of that of vision alone; disturbances of intelligence eleven times. Once there were merely disorders of motion, once only headache. One tumor (aneurism) was symptomless. (b.) *Tumors at the base of the brain in the neighborhood of the pons Varolii* (nine cases) were accompanied by the following symptoms: headache eight times, mostly in the frontal region, not seldom upon the same side with the tumor. Paralysis of vision, and usually also of hearing and taste, more rarely of smell, upon the same side with the tumor, together with paralytic phenomena in the extremities of the opposite side. More rare were hemiplegiæ of the same side, or paraplegiæ, as well as convulsions (which in case of their occurrence were never epileptiform). Anomalies of the psychical functions were less frequent (five times). Of especial importance for diagnosis is the generally existing manifoldness of the affected senses, with predominant inclination of the visual disturbance to become bilateral. (c.) Out of the author's forty-four cases only one tumor occurred in the *pituitary region*. (d.) *Of tumors at the anterior part of the base of the brain*, there were only two cases. (e.) In three

cases of tumors at the base, upon *the crura and peduncles of the cerebrum and cerebellum*, vision, and the extremities of the same, and, indeed, of the side opposite the tumor, were always paralytic; twice, manifold disturbances of sense occurred, and other cerebral nerves were involved (*Oculomotorius, Trigemini*). (*f.*) *Tumors of the cerebellum* were characterized by the following symptoms: violent headache (seven times), often occurring at intervals, four times accompanied by vomiting; four times the tumor was seated in the posterior part of the skull. One case was symptomless. Phenomena on the part of the sexual sphere never existed. (*g.*) *Numerous tumors* in various regions, occurred in three cases.

Etiology.—Of the forty-four cases, twenty-eight were males, fifteen females; once the sex was not given. Of the carcinomatous tumors, nine occurred from the tenth to the thirtieth year of life; eighteen, from the thirtieth to the fiftieth; seven, from the fiftieth to the seventieth. Of the ten cases of cerebral tubercles, four occurred from the first to the tenth; one, from the tenth to the twentieth; three, from the twentieth to the thirtieth; one, from the thirtieth to the thirty-fifth year. Once the age was not given. In these ten cases, eight times pulmonary tubercles existed, twice the thorax was not opened. The farther etiological momenta were traumatic injuries affecting the skull, and in five cases, chronic, long-continued exanthemata.

The *therapia* consists, above all, in regulating the patient's mode of life, and in removing every mental as well as corporeal excitement. The nourishment should be easily digestible, and adapted as much as possible to the general condition of nutrition: the drink should consist of cooling and indifferent fluids. The temperature of the sick-chamber should be low. Where there is sluggishness of the intestinal canal, stools should be procured by cathartics or clysters. General or local abstractions of blood may be made at times upon the increase of certain symptoms, such as headache, giddiness, convulsions, &c. The administration of emetics, the author considers not advisable. Cold, in various forms, and cutaneous irritants have a decided effect in alleviating the symptoms.—*Schmidt's Jahrbücher, Feb., 1854.*

THERAPEUTICS.

New Treatment of Hypochondria.—Dr. Ch. Masson, in the *Gazette des Hôpitaux*, describes a new mode of treating this disease. The writer first speaks of a mode of treating epidemic cholera, proposed and practised by him in the epidemics of 1832 and 1849. Considering cholera to be an "intoxication of the sub-cerebral nervous system," he believed that "the

most efficacious means of obtaining a prompt and decided reaction was to act on the prolongation of the brain, that nerve-tree whose thousand branches carry to the members and organs motion and life." Accordingly, he produced a rapid vesication along the spine by means of cantharidal ointment. Having been appointed, in 1836, by the Society of Practical Medicine, to a post which brought a large number of poor patients under his observation, he "was astonished to find among men of the laboring classes a dozen hypochondriacs. Till then, I had always thought that this disease was most frequently met with among idle people, or those who had been enervated by abuse of pleasures or of study. To all questions they made the same answers, mingled with absurd reasonings upon the causes of their disease. They complained of sluggish digestion, of nausea, of borborygmi, of constipation, alternating with diarrhœa, of general and wandering pains; the urine was sometimes abundant and limpid, sometimes scanty and lateritious; they burned, or were icy cold; sometimes cramps, palpitations, and chokings came on; the sadness and restlessness which tormented their days pursued them in their sleep; their rest was disturbed by sad and frightful dreams; and still the most attentive examination did not reveal any alteration which could account for so general disorder." Taking into consideration the number of organs whose action was perverted or suspended, the question occurred to the writer, whether or not the sub-cerebral system were not, as in cholera, the principal seat of the disease. His conclusion was that the seat was the same, and that any organic changes occurring were the effects, rather than the causes of the spinal diseases. The same treatment, "frictions with strong cantharidal ointment, recommenced after desquamation."

Dr. Masson found more docility and perseverance among his patients than he hoped for, and has accounts of nine hypochondriacs cured by this method: one of them had suffered for seven years. In conclusion, he recommends this treatment to the profession for the double purpose of relieving those unfortunates who have little occasion to expect relief from medicine, and as not infallible, but most useful in epidemic cholera.

SURGERY.

Recent traumatic symblepharon; simple operation, and immediate success.—A boy, two years old, received a wound from a cat's claw at the external angle of the left eye. Some days after the accident, the child, when brought to M. Sichel's clinique, presented the following pathological condition:—

A narrow, vertical strip of the outer part of the sclerotic conjunctiva, one-fourth of an inch long, is united by its inferior extremity to a super-

ficial wound in the free border of the lower lid, very near the external commissure. When the little patient looked to the left, this peculiarity was not distinguishable, on account of a sub-conjunctival ecchymosis, in which the still red strip of the conjunctiva lost itself; but when he looked to the right, the symblepharon became apparent, and produced a degree of divergent strabismus, although the adherent bridle, still soft and extensible, was elongated during the movements of the globe of the eye. On causing the eye to turn to the outer angle, the relaxed and flaccid bridle was easily raised, and a stylet passed freely between it and the ball. Under these circumstances, the cure of the symblepharon by excision of the bridle was certain, and the operation easy. The insertion of the lower extremity of the bridle was cut off close to the lid; then, an examination having shown that there was not, in the vicinity of the small palpebral wound, any part of the ocular conjunctiva still suppurating, the floating bridle was also divided, at its upper extremity, close to the globe. The two bleeding points were so distant that their contact was not possible in any position of the parts concerned. It was not even necessary to cauterize the palpebral wound, to prevent adhesion to the globe. The next day the cure was considered perfect.—*Gazette des Hôpitaux*.

Iodine Fumigations in Scrofulous Ophthalmia.—Observing the good effects which follow the topical use of iodine in ulcers and scrofulous tumors, one of the physicians of the Hôtel Dieu of Lyons, M. Bouchet, thought that this metalloid would give similar results if applied to the palpebral mucous membrane affected with constitutional ophthalmia. This physician proposed, therefore, to treat patients affected with scrofulous ophthalmia by vapors of iodine, applied to the eyes by means of a small apparatus constructed thus:—On a metal capsule, heated to the desired degree, small pieces of iodine are thrown. Above the capsule a kind of tunnel is fitted, terminated by an opening in the form of an eye-cup. In this way the vapor is entirely retained, and the ocular surface is subjected to its action as long as is wished, without the patient being suffocated by the penetrating odor of the iodine. The two cases subjected to this new mode of treatment, which the interne, M. Beauclair, published, should cause it to be admitted to be undoubtedly a rational method in practice, but the efficacy of which is still dubious. M. Bouchet's mode is worthy of note from the facility which it affords for practising ocular fumigation.—*Gaz. Med. de Lyon*.

PRACTICAL MEDICINE AND MEDICAL PATHOLOGY.

Case of Inflammation of the Gall-bladder, induced by Gall-stones, terminating in Abscess. By Dr. L. SCHRADER.

An unmarried woman, 45 years of age, had suffered for a long time from paroxysmal pain in the epigastric region, which had been taken for cardialgia. This pain became at length fixed in the right hypochondrium, and was permanent. About three months before the patient came under my treatment, a swelling was formed beneath the costal arch of the right side, which gradually increased, was very sensitive to pressure, and rendered the bent position exceedingly irksome. By degrees, the skin over the tumor

reddened, and at length a perforation took place, with the discharge of a considerable quantity of pus. One morning, the patient observed on the plaster which she had just removed, four small bodies of different size, which were taken for hardened pus, and thrown away. Upon the following days similar bodies were discharged in still greater number. Being somewhat alarmed by this, she resolved to seek medical assistance.

I saw the patient for the first time, about eight days after the rupture of the abscess. Her general condition was not essentially altered; the appetite good, a daily alvine evacuation, and the excrement had the usual color. The patient performed her household duties, and could even make journeys on foot to the neighboring districts. The liver projected about a finger's-breadth beneath the costal arch, this projection extending beyond the *linea alba* about the same distance to the left; pressure upon it produced no pain. At about three fingers'-breadth from the costal arch downwards, and four fingers'-breadth distant from the middle line, just at the outer border of the right *rectus abdominis*, was found a small opening from which oozed continually a fluid of a yellowish color, and with an alkaline reaction. With careful manipulation, the sound penetrated about an inch deep in a horizontal direction, but could be introduced no farther. The contiguous dermoid surface was reddened, and at some depth could be felt a hard body of the size of a florin. In the discharged fluid, none of the constituents of the bile could be found; on the other hand, it contained a few pus corpuscles and granular cells. As regards the above-mentioned bodies discharged from the abscess, of which the patient gave me twelve, they were manifestly gall-stones, which, as analysis proved, consisted chiefly of cholestérine. After the lapse of a few weeks, the pain was renewed, the discharge became again more copious, and two gall-stones, with facettes, made their appearance; when the symptoms ceased. The whole number of gall-stones discharged through the abscess, amounted to twenty. Since that time (about a year and a half) no more have been discharged; the very narrow fistulous opening remains, and an almost transparent fluid, with a scarcely perceptible tinge of yellow, is effused. The person is perfectly well, and performs since, as before, very severe labor.

The inflammation of the gall-bladder in this case, was, without doubt, induced by the concretions. It terminated, after previous adhesion of the gall-bladder with the abdominal walls, in the formation of an abscess and the discharge of the contents externally—the most favorable issue which could occur under these circumstances. That the passage of the bile into the duodenum was not at any time obstructed, is evident from the absence of any permanent disturbance of digestion, the want of icteric phenomena, and the normal color of the fœces. On the other hand, it is very probable to me, that the inflammation produced a closure of the *cystic duct*, with partial destruction of the gall-bladder. This seems plausible to me, because neither after the rupture of the abscess and the discharge of the gall-stones, nor in the farther progress of the case, was any fluid discharged which had the appearance of gall, or in which the constituents of the gall could be found. Probably the mucous membrane of the gall-bladder underwent a change similar to that which occurs in the so-called *Hydrops vesicæ felleæ*, that is, that with the surrender of the character of a mucous membrane, it took on more the quality of a serous membrane, the secretion from which was discharged externally through the fistula.—*Deutsche Klinik*, Jan., 1854.

On Typhus with Convulsions. By Dr. FRUA.

The interesting paper of Frua on Dubini's so-called *electric chorea*, is communicated by Bucellati in an abstract form, from which our reporter extracts the following. The author objects to the appellation of Dubini, because it does not correspond to the highly rapid course of the disease, and the attribute, electric, is not adapted to all cases; he proposes the name, *convulsive cerebral typhus*.

The disease attacks females more frequently than males, countrymen than citizens; it spares no age, but is nevertheless most frequent at the time of the recession of the catamenia. The nervous constitution, simple hypertrophies of the heart, helminthiasis, and disturbances of menstruation, dispose to it. The exciting causes are especially fright; in some cases sorrow and long-suppressed anger. The disease occurs at times immediately after the exciting cause, at others several days, one or two months, later; sometimes a vague indisposition precedes, sometimes symptoms of commencing neuropathy. The convulsions appear under two forms, as startings of the muscles of a finger, or of a part of the hand, or one extremity, which are followed by convulsions of one-half of the body, returning several times daily. The latter return at regular and irregular periods. At their commencement the expression of the face becomes earnest, the look fixed, the globe of the eye turns to one side of the orbit, the head is turned to the same side; after two or three minutes the muscles of one half of the body begin to contract synchronically, the mouth stands half open, the tongue appears to tremble upon one side, the face becomes red, consciousness is obscured, the respiration is interrupted, the pulse frequent, the skin covered with sweat. The contractions now become more rare, partial, and the paroxysm ends in the course of from one-half to two minutes; the patient lies unconscious, and after a time comes to gradually, often with violent thirst and headache. The sensibility of the skin is frequently diminished during the continuance of the disease, the motility weakened, and hemiplegia gradually developed. The energies of sense, and the intelligence, become more and more blunted with the number of paroxysms. Later the pulse is small and unequal, the tongue remains moist and the appetite unchanged through all stages of the disease; meteorism very rarely occurs. The greatest part of the patients die in the course of the first month; recovery follows very seldom and very slowly. There is as yet no special therapia for this disease. The author considers it important to prevent the outbreak of the paroxysms by dashing cold water upon the patient. He also commends Bordeaux wine, nutritious food, clysters of quinine, quinine endermatically, a cold bath, and occasional warm baths, according to the indication. By this method the author cured one patient, who had previously passed through antiphlogistication in vain. A second case, treated in this manner, convalesced. After two venesections this patient was immediately worse, whereupon the author boldly changed to the roborant treatment. He recovered after the use of wine, quinine, and nutritious food. A third case recovered under the same method. Of the remaining fifty cases, which were mostly treated antiphlogistically, only two recovered. Every one will surely hail these results, from Frua, with joy, and as an indication which announces the near-approaching overthrow of the old custom of Italian medicine, an unconscionable antiphlogosis.

The autopsies gave the following results : constant, minute, ramose injection of the pia mater in different degrees, with slight adhesions; the cortical substance of the brain at times redder at particular points than at others, the upper part generally redder than the basilar portion; the white substance somewhat richer in blood than usual; little serum in the ventricles—and with marked hyperæmia of the brain—dryness and contraction of them; the pes hippocampi, minor and major, frequently reddened, especially upon the side corresponding to the chorea; the spinal marrow in general normal. Lungs normal, heart at times hypertrophic, in particular cases with slight thickening of the valves. The solitary follicles and Peyer's patches frequently quite prominent, spleen sometimes normal, sometimes infiltrated with a vinous-red fluid.—*Schmidt's Jahrbücher*, Jan. 1854.

PART IV.—HOSPITAL RECORDS.

BLOOMINGDALE ASYLUM.

THE Governors of the City Hospital soon discovered that the benefits of the charity were claimed for many laboring under mental infirmity as well as bodily disease; and, according with this demand, certain apartments were appropriated to the reception of this class of patients. The practical inconvenience of the admixture of these two classes of ailments in the same building soon became apparent. From the inadequacy of the accommodations in extent and appropriateness, as well as the increasing applications for admission, it was determined to apply to the Legislature for assistance in the erection of a separate building for the reception of the insane.

The Legislature, in 1806, passed an act continuing an annual provision to the Hospital, out of the duties on sales at auction in the city, until 1857. The Governors immediately set about the building subsequently extended and known as the "Marine Department," which was opened for the reception of patients on the 15th July, 1808, when sixty-seven patients were received. The cost of this primary asylum was about \$56,000. Legislative action was required to aid the Governors to liquidate the debt incurred in the completion of this building; and, in 1810, \$3,500 per annum, for ten years, was appropriated for this purpose, an annuity which was afterwards cut short by a clause in an act passed in 1817. Such is a brief history of the earlier attempts to establish a lunatic asylum in this city.

In 1815, the enlightened and philanthropic spirit of Mr. Thos. Eddy, who for thirty-four years acted as one of the Board of Governors of the Hospital, prompted him to bring before his colleagues, in an ably written communi-

cation, the advantages attending the introduction of an ameliorated system of moral treatment, such as was successfully pursued in Britain, and which had only to a limited extent, at that time, been practised in this country. It is somewhat curious and interesting, in connection with this point, to reflect upon the change brought about by forty years. America, to her praise be it now spoken, stands preëminent among the nations of the world for the system upon which the treatment of the insane is conducted in her several asylums, for the admirably complete arrangements made for the collection and dissemination of statistical information upon every point which can elucidate the pathology of insanity, for the liberal endowments made for the support of these institutions, and for the high standard of intellectual and scientific acquirements possessed by the medical staff attached to them.

Mr. Eddy's communication was acted upon with promptitude by the Governors, to whom it was addressed, and the Legislature to whom they appealed for assistance in the good work. In 1816, an act was passed, granting the sum of \$10,000 per annum, until 1857, for the purpose of purchasing a tract of land and building suitable edifices. Several efforts to select an appropriate spot were made, purchases having been effected at Harlem Heights, at a point nearer the East River, and lastly, the site of the present establishment. The original extent of the grounds was forty-six acres, which have been from time to time increased, until they now cover eighty acres. The corner-stone of the building was laid in May, 1818, and in June, 1821, the building was opened for the reception of patients, and received the name of the "Bloomingdale Asylum." The main building was the first portion finished; in 1830, a detached wing was erected for the more violent male patients, and in 1837, a corresponding wing was put up for females of a similar class. The whole expense of the buildings and furnishing, up to 1839, was \$200,000. In order to meet these heavy liabilities, the Governors were under the necessity of borrowing a very large sum of money. This liability thus created has been, by a judicious financial management, almost entirely obliterated. The want of further accommodation, however, has been felt in this department, as well as in the Hospital; and the Governors have been very strenuous in their appeal to the public benevolence for further aid, which they do not seem to anticipate from repeated legislative grants.

The situation of the Asylum is on the Bloomingdale road, about seven miles from the City Hall. It is somewhat elevated above the surrounding neighborhood, and commands a very extended and pleasant prospect of the rivers, city, and its environs. The grounds are neatly laid out and well kept, and everything about the place bespeaks an air of quiet and solid comfort highly calculated to enhance the treatment pursued, and to

render the unfortunate inmates happy in so far as they are susceptible of enjoyment. Little can be said of the architectural merits of the buildings themselves: they are essentially utilitarian, and seem to answer their purpose equally well with more ornate structures. Still, there is to the eye a want of harmony, as it were, between the extensive and well-arranged grounds and the simple building.

The statistics of this institution are full of interest.

Lunatics admitted previously to the year 1811,.....	643	Lunatics admit'd in the year 1831,....	151
" " in the year 1811,....	108	" " " " 1832,....	118
" " " " 1812,....	127	" " " " 1833,....	138
" " " " 1813,....	105	" " " " 1834,....	102
" " " " 1814, ...	104	" " " " 1835,....	138
" " " " 1815,....	69	" " " " 1836,....	121
" " " " 1816,....	49	" " " " 1837,....	112
" " " " 1817,....	49	" " " " 1838,....	122
" " " " 1818,....	75	" " " " 1839,....	113
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" " " " 1820,....	87	" " " " 1841,....	102
" " " " 1821,....	123	" " " " 1842,....	86
" " " " 1822,....	102	" " " " 1843,....	85
" " " " 1823,....	131	" " " " 1844,....	106
" " " " 1824,....	121	" " " " 1845,....	138
" " " " 1825,....	156	" " " " 1846,....	133
" " " " 1826,....	142	" " " " 1847,....	143
" " " " 1827,....	134	" " " " 1848,....	138
" " " " 1828,....	134	" " " " 1849,....	95
" " " " 1829,....	91	" " " " 1850,....	97
" " " " 1830,....	134	" " " " 1851,....	95
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It is worthy of observation that this return exhibits a great increase from the preceding years in 1823, 1825, 1830, 1833, 1845, 1847. It will probably be remembered that three of these periods at least were remarkable as great monetary crises, and all of them characterized by more or less mercantile embarrassments. It is not our purpose, in this article, to enter into the discussion of the extent to which pecuniary embarrassments may become the proximate cause of mania; but the facts here alluded to, as shown by these tables, are no less striking than important in psychological pathology. The whole number of patients admitted to the Asylum from its commencement, as a ward in the Hospital, to 1852, was 5,329. Cured (exclusive of 1852), 2,417; relieved, 995; discharged by request, 921; disorderly, or eloped, 155; died, 541. The relations of the numbers under these respective headings, although of much importance in a strictly scientific point of view, lose their value in the moral aspect of the subject. This has been beautifully pointed out by one of our writers, in the following language:

To how few can the simple statement that so many have recovered, give any idea of the peculiar joy experienced by those who have seen the cloud

of disease lifted up from their spirits, and the undimmed light of reason shining serenely out upon their mental horizon! The hours of mental torture that have been soothed, the crushing burden of distrust and apprehension that has been lightened, the joy of those—the husband, father, child—who welcome the return of the loved one as from the grave; the relief of that desperate agony which, day after day, has been aggravated by the appalling sights and sounds that often crowd upon the shattered mind; the restoration to the domestic circle of peace, order, and quiet, that has followed the withdrawal of some uneasy spirit whom none of the arts of kindness could please or soften,—these are benefits that cannot be estimated by figures, though not among the least conferred upon a community by establishments like ours. Neither are words more adequate to the purpose, because these benefits lie too far beyond the range of ordinary experience to be conceived of by any who have not personally seen and felt them.

RECORDS.

Statistical Tables.—In the first number of the MONTHLY, it was stated that blank forms had been furnished to the several hospitals in this city and in Brooklyn, with the view of procuring accurate tabular returns, of the number, nature, history, and results of the medical and surgical cases admitted during each month. This was done with the knowledge and approval of the chief medical officers of the several institutions, and the forms were confided to the residential physicians and surgeons. With a solitary exception, in the instance of a private establishment, none of these have been returned completed for any one month during the past six.

What was considered to be a strong appeal, was made to the *esprit du corps*, of those who were solicited to provide the required information; and the advantages to be derived from pursuing such a course of methodical notation, both immediate and ultimate, personally and relatively, were plainly stated. It would be unpardonable affectation to say that we are not disappointed, at the wholesale manner in which the request, politely, yet urgently made, has been hitherto disregarded. The only consolation presenting itself to our mortified expectations, is the hope, that time and reflection will induce a more favorable consideration of the proposition, and that we shall, at the close of the next volume, be able to present the reader with the fruit of a more ready compliance with our desire, in a carefully-digested table of the practice of our city hospitals. We refrain from discussing the grounds of objection, or the reasons which have prevented a compliance with our request; as they are, in those instances in which they have been offered, neither of sufficient weight or importance to interfere with the execution of the design, nor of such a nature as to be unsurmountable, by a comparatively small expenditure of time and pains-taking. In

those institutions in which a change of individuals has occurred, in the house-officers, the writer will make it his business to give a renewed personal explanation of the nature, extent, and importance of the knowledge sought to be attained.

St. Vincent's Hospital.—At this institution we were much pleased with the successful result of an operation performed by the younger Mott, in which not only the general appearance of the patient has been most signally improved, but the normal function of an eye restored, and, very probably, the life of the patient preserved. We had not the opportunity of seeing the case before, or of witnessing the operation, but have received from eye-witnesses, and the patient himself, a very intelligible account of his sufferings and appearance;—we can, therefore, only speak positively of the result. It would seem to have been a case of exostosis, springing from the lachrymal bone on the left side, involving also the contiguous nasal bone, and a portion of the orbital plates of the superior maxilla and frontal bones. It had forced the globe of the eye from its normal position in the orbit, and impaired vision with that eye; it was attended with a profuse offensive and exhaustive discharge, which was rapidly impairing the general health and was very repugnant to the patient and his friends. By a series of ingeniously planned and well executed incisions and flaps, the whole disease, with the structures involved, have been removed, the integrity of the integuments preserved, and the position and function of the eye restored. The health of the patient has been completely reëstablished—the wounds have healed kindly and quickly, and but for one or two linear cicatrices, which time will very much modify, none who saw him before fail to appreciate the value of judicious and skilful surgery. Nor can the result be less gratifying to the operator who made the attempt to relieve his patient, with the disadvantage of a most unfavorable prognosis formed by himself and colleagues.

Ward's Island.—The case of amputation at the shoulder-joint, reported in the MONTHLY for April, is now discharged from the surgical wards, the stump having cicatrized, with but one slight interruption from hæmorrhage arising from one of the muscular branches, abnormally enlarged from the previous long-standing disease; a casualty brought on by an act of imprudent exertion on the part of the patient, within a few days after the operation. He has much improved in general appearance, and is gaining flesh rapidly. Life is now, for the present, at least, made tolerable to him, and may continue so for years. Examination has proved the tumor to be malignant in its character; it is also of a composite structure, and is, altogether, a very valuable pathological specimen.

There is also now in the hospital a very interesting case of successful amputation above the ankle, somewhat modified after the plan of Lenoir, in which a combination of the circular and flap operations has produced an exceedingly neat and firm stump.

There is at present a slight epidemic of erysipelas, but as yet it has proved mild and amenable to treatment.

The eye-wards in this charity are exceedingly interesting and instructive and are remarkably well kept, especially the adult male ward, in which are congregated, just now, upwards of sixty, there are frequently many more, of a very unruly set of patients.

It is very gratifying to find that among the liberal arrangements made by the Commissioners of Emigration for the comfort of the patients, that the convenience of the surgeons has not been overlooked entirely, as has hitherto been the case. Heretofore, it was necessary to perform the operations either in the wards, a most objectionable procedure and attended by prejudicial consequences to the inmates, or in a miserably small, badly-lighted room, situated at some distance from the wards. Now, however, a very fine, commodious apartment, admirably lighted and well ventilated, in the upper part of one of the surgical wards, has been appropriated for this purpose. We have no doubt that to Dr. Carnochan and his colleagues the change has been a very acceptable one.

New York City Hospital.—It is a matter of surprise, at the present day, with the accumulated and daily-increasing evidence in favor of chloroform, that the surgeons of this charity continue to prefer ether for the induction of anæsthesia at their operations; and not only do they give the preference to the latter, but they absolutely interdict the employment of chloroform. Their objection is said to be founded principally on the issue of one fatal case some time back. We are not sufficiently cognizant of the circumstances to say whether the case can be regarded as a purely fatal result, or only an accidental casualty; but, even admitting the former to be the real state of the case, it seems hardly fair to condemn an agent now so universally employed on the issue of a single case, in opposition to statistics like the following:—

In *one* hospital in *London alone*, that of St. Bartholomew, more than *thirty-five thousand persons* have been submitted to its full influence with only one accident of importance—that in *Edinburgh more than four hundred thousand doses* have been sold by the druggists to the surgeons of that city, and *only one* death from its use has resulted.

The writer in the periodical from which the foregoing passage is taken, gives the following happy and pertinent comments on the facts:—

The most serious objections to the use of chloroform, whether in surgery or midwifery, is the danger which is supposed to attend its use. In several cases death has followed the use of chloroform so closely that the drug has appeared to be the sole and direct cause of death. In most of the cases the appearance has been deceptive, but in others death may have resulted from the use or abuse of chloroform alone. When we reflect how generally it has been used in all parts of the world by persons *who had to obtain their knowledge of its effects by experiment*, and were therefore unskilled in its administration—remembering also that it has very frequently been used in an impure state, and combined with deleterious substances—the wonder is, not that some few deaths may be traced to the use of a new remedy, but *that they should have been so few*. Considerable doubt still hangs over the few exceptional cases, for death will sometimes occur in the most unexpected, inexplicable manner under the most trivial operations. Patients have died suddenly just before some contemplated operation was commenced, and had chloroform been given, it would assuredly have been set down as the fatal agent. Several such cases may be found in the pamphlets of Dr. Simpson, two of them being especially remarkable, as they, by what might be termed a mere accident, narrowly escaped being the first cases in which chloroform was tried; death followed a simple puncture in one case, a simple incision in the other, and in both without any apparent cause. Had chloroform been given to these patients, death would doubtless have been attributed to its influence, and probably its use would have been entirely abandoned.

PART V.—EDITORIAL AND MISCELLANEOUS.

THE CLOSE OF THE VOLUME.—With this number closes the first volume of the MONTHLY, and it seems a fit occasion to say a few words to our readers, of its prospects. Unannounced as the publication was, by prospectus or other agency, suspiciously received as it was in some directions, coldly welcomed as it was in others, while by only a few it was warmly greeted, it would not have been strange if discouragement had been the result of the first six months' experiment. It is our duty, as well as our pleasure, to say that our experience has been precisely the contrary. The side glances of suspicion have yielded to the kind looks of friendship, and already has the cold shoulder become less frequent. From all this we are certified that our calculations were not erroneously made as to the demands of the profession, or the means at our disposal. Without too much self

gratulation we may say that the MONTHLY has already won for itself an enviable reputation both at home and abroad. In its pages there has been presented to readers a very unusual proportion of original matter, and that of a high character. Should we include as original, as some journals do, the translations made especially for the MONTHLY, it would be found that nine-tenths, at least, of this volume, come under that head. This is mentioned, to show that we do not simply reproduce stale translations, but endeavor, when we borrow, to do it from those sources which are not open to most physicians.

Exerting ourselves to the utmost to support the profession, we are justified in calling upon the profession to support us. Our subscription list has grown remarkably fast; but we are aware that many gentlemen are each day intending to forward to us their names and money, but only are prevented by procrastination. To such we beg leave to say, that farther delay is to their injury as well as our own, and if they desire to *encourage* this truly national enterprise they should do so immediately, not waiting for it to be established without them. The many different States of the Union from which our subscribers come, convinces us that we have, in following the doctrines which we at first announced as our guides, only done what the profession desired. By those doctrines and principles we shall continue to direct our course.

John Bull vs. French Therapeutics. Young America vs. British Surgery.

Nulla est alia pro certo noscendi via, nisi quam plurimas et morborum et dissectionum historias, tam aliorum proprias, collectas habere et inter se comparare.
—*Morganin. De Sed. et Caus. Morb. lib. 14.*

In our April number we gave an extract from the London "Medical Times and Gazette," containing a caustic sneer at "French Therapeutics" for some "startling illustrations of the utter incompetency of their French brethren in dealing with matters of therapeutics." With an amusing coolness the writer asks, "Can nothing be done, in these times of French and English fraternization, to remedy such disgraceful ignorance on the most important subjects? Might it not be well to raise a subscription, translate Dr. Hughes Bennett's last book, and distribute it gratis to the French faculty." The writer winds up this withering sarcasm by saying that the man who is guilty of such ignorance as is there complained of, "would merit for his inhumanity to be dismissed from the profession and discarded from society"!!

You are right, John Bull. Let us implore you to establish medical missionaries among the poor, benighted French, and while you take care of

"French Therapeutics," "Young America" will look after British Surgery. "In these days of the printing press and the steam engine, when treatises pour forth on all sides, and the journey from London to Paris may be made in six hours, it must be matter of astonishment to any observer how slowly knowledge spreads"—that is to say, from Great Britain to France. It is equally astonishing how slowly it spreads from the American shores to the British Isles. This is evident by a glance at the "Mirror of the Practice of Medicine and Surgery in the Hospitals of London" in the last number of the London Lancet, where we find reported two cases of vesico-vaginal fistula under the care of the surgeons of St. Mary's Hospital. In these reports we find "such utter incompetency" and such a "lamentable ignorance" of the present state of science on this subject, that we venture to remind our British brethren that the proper way to keep up with the improvements of the age "in these days of the printing press and the steam engine," is simply to read American Medical Journals a little more frequently. "Can nothing be done in these times of French and English fraternization to remedy such disgraceful ignorance on the most important subjects!" Might it not be well to raise a subscription, print the beautiful little brochure of our countryman, Dr. J. Marion Sims, "on the operation for vesico-vaginal fistulas," and distribute it gratis to the British faculty?

But, badinage apart, let us look for a moment at the character of these reports. "The operations of Jobert de Lamballe, of Fergusson, Avery, and others," of Mr. Pollock, Mr. Lane, and Mr. Brown, together with the ridiculous and perilous effort of M. Maisonneuve, of Paris, "whereupon the patient died of purulent infection," are all gravely dwelt upon; while the brilliant operation of Dr. Sims (the only operation for this terrible affection that has either reason, science, or experience to support it) is entirely ignored. Its author, be it said for the honor of American surgery, has demonstrated its perfect success to the entire satisfaction of the American medical public, and we can hardly pick up a journal that does not contain a new trophy of this great achievement. We would, therefore, gravely reiterate our recommendation to our British brethren, who can read *American* without a translation, to take our medical journals, which will keep them up with the improvements in surgery, while they are amusing themselves with the improvements of "French Therapeutics."

We shall take some trouble to place before our transatlantic brethren some facts on this subject.

We simply premise, that previous to the time of the promulgation of Sims' operation, there had been no really practical advance in the treatment of vesico-vaginal fistula. It was all uncertainty and empiricism. The only thing *certain* was a *failure*. Dr. Sims published an account of his operation in the Am. Journ. of Med. Sciences for Jan., 1852, giving a full detail of his

inventions and success. Now, we find one of the surgeons of St. Mary's Hospital, without any acknowledgment of the source of his information, following Dr. Sims' general directions. He uses Dr. Sims' position for his patient, "the reflecting retractor," as he calls it, for holding up the bowel out of the way and of throwing light on the anterior wall; the quilled suture was applied, and "a bent tube permanently retained in the urethra to prevent the passage of urine interfering with the work of cicatrization." Fie, Mr. Bull. Set a better example before your young men. If you get an idea from Young America, have the manliness to say so. But perhaps it was only a coincidence, whereby your patient came *near* being cured. For the purpose of making your cure complete, suppose we refer you to other sources for information.

If you will turn to the Am. Journ. of Med. Sciences for Oct., 1853, you will see that the distinguished western surgeon, Dr. Mussey, cured a case of recto-vaginal fistula by the "*clamp suture*" of Dr. Sims. He says, "Dr. Sims is well entitled to the thanks of the profession for having introduced what he calls the clamp suture in the treatment of vesico-vaginal fistula, consisting of two cylinders of silver or lead, perforated at several points, for the passage of pieces of silver wire, which supply the place of thread, and which are to be prevented from slipping by perforated shot carried down upon them, passed against the cylinders, and kept in place by being firmly pinched with pliers." Dr. Sims makes his cylinders one line or more in diameter, and his wires the size of a horse hair.

Prof. Chas. Bell Gibson, of Richmond, Virginia, has cured a case of vesico-vaginal fistula by the American method. (*Vide Stethoscope*, Aug., 1853.) Dr. Holmes, of Mississippi, has used the same method with success. (*Vide New Orleans Med. and Surg. Journ.*, Nov., 1853.) Dr. Bozeman, of Montgomery, Ala., has been equally successful. (*Vide N. O. Journ.*, May, 1854.)

We learn, from a private source, that Prof. Chas. A. Pope, of St. Louis, the recently-elected President of the American Medical Association, has been equally successful. The distinguished deviser of this operation has reported three successful cases in the N. Y. Med. Gaz. for Jan., 1854; another (quite an unique case) in the AMERICAN MED. MONTHLY for February, 1854, and the writer of this article reported another by him in this journal for April, 1854.

Dr. Sims has also reported a novel case, in the New York Med. Times, where the lady was cured in thirteen days by his beautiful and perfect operation, after submitting to the application of the actual cautery every four or five weeks for several years. Is it any wonder that the author, in reporting this case, exclaims, "What a commentary on the imperfections of an art does this case afford, when we see it, after seven and a half years of use-

less torture with the actual cautery, cured in thirteen days by a simple operation, which I shall yet live to see characterized, not as the work of an individual, but as the achievement of American Surgery!" Already has that time arrived, for we can hardly take up an American Journal that does not contain the evidence of its success in the hands of American Surgeons. Therefore, may we proudly place this chaplet on the brow of Young America, which we know to be not only the desire, but the highest ambition of its rightful owner.

We could very easily go into an analysis of British, French, and German Surgery on this head; but the contrast with the great American operation would be so wide that it would be a mere glorification of the author of our method; for until his systematic, philosophical experiments, there were no principles to guide us. Now, however, every thing is clear and certain. The position of the patient, and the beautiful lever speculum or elevator of the perineum and rectal septum, the admirable self-retaining catheter; but, above all, (for without it the other contrivances would be futile) the *clamp suture*, which lies safely imbedded in the tissues for an indefinite period, all combined, make this operation in its simplicity, perfection, and success, one of the most brilliant achievements of modern conservative surgery.

It will be observed that the only claim we have here put in for our country, has been in the department of *Obstetrical* Surgery. We might, with equal force, point out the ignorance of our foreign brethren as regards the progress made in this country, in the development of new and important improvements in the other departments of our profession. In Surgery, for example, the method of reducing dislocations of the femur, recently brought into notice by Dr. Reid, of Rochester, who seems to deserve the merit of an originator, although a similar method was taught and practised by the late Prof. Nathan Smith, of New Haven. But while we shall endeavor to see full justice done to American *obstetrics*, we shall leave the claims of the other branches of the profession to be defended by more appropriate pens. *Ne sutor supra crepidam.*

In conclusion, we will only add, that while we despise that illiberal spirit which refuses to receive and accept what is new and true, because it comes from a foreign source, we lack words to express our intense disgust for those renegade Americans who would deprive our own countrymen of their merited distinctions, to bestow them, undeserved, unasked, and unclaimed, upon distinguished foreigners.

B. F. BARKER.

LABZELLEN,—STOMACH CELLS.—In the interesting translation of Kölliker's *Physiological Observations on the death of a suicide*, which we pre-

sent our readers in this number, the words stomach cells frequently occur. The German word, which is thus translated by Dr. Bennett, is Labzellen. In order that the difficulty of rendering technical words may be appreciated, as well as for the interesting suggestions of the paragraph, we quote the following from a note from Dr. B. upon the subject, only regretting that we did not receive it in season to add it as a note to the translation itself:

I was very much troubled to make a satisfactory translation of the word Labzellen, but finally rendered it "stomach cells." The only literal definition of it which I can obtain or imagine, is rennet-cells; having reference, as I suppose, to the resemblance of these cells in the human stomach, to those found in the *rennet* or fourth stomach of ruminants. The truth is, that each microscopist employs terms to suit his own fancy, and it is difficult to keep pace with their nomenclature. I observe that in the Medico-Chirurgical Review this word is translated *scale-like* cells, but in what possible manner it can be distorted into this signification, I cannot imagine. The word is compounded of *Lab* and *Zellen* the first meaning *the rennet*, and the second, *cells*. I have simply called them stomach cells.

THE AMERICAN MEDICAL ASSOCIATION.

The seventh annual meeting of this national scientific Association, took place in St. Louis, on the second of May. The president (Dr. KNIGHT, of New Haven) not being present, the senior vice-president (Dr. USHER PARSONS, of Providence, R. I.) took the chair, and opened the meeting with an appropriate address, from which we can only afford space to make the following extract:

In order to promote the honor, dignity, and usefulness of our profession—objects for which the Association was instituted—its members must be gathered from all parts of our country, and united into one harmonious fraternity, and must adopt such measures as will promote and perpetuate among ourselves an *esprit du corps*, a conformity of sentiment and feeling, and a combination and coöperation in action. This has been already accomplished in a good degree, by holding our annual meetings in distant and remote cities of the Union. They must continue to be carried to new and ever-varying spheres of action, until their beneficial influence is made available to the whole profession. As the metallurgist, in separating a heterogeneous mass of particles, passes over it a magnetic bar to attract the pure iron and steel with a force proportioned to its proximity, so must the meetings of this Association, in order to gather into one fold suitable materials of growth and strength, be carried from place to place over the great mass of our whole population, attracting from the dross and impurities all that is of value and worthy of reception and incorporation into a homogeneous and efficient brotherhood. These considerations influenced me in voting to accept the invitation to hold the present meeting in Missouri, notwithstanding the toil and fatigue of the journey, and its remote-

ness from the residence of a large portion of the delegates. It is here, more than elsewhere, that the meetings of this Association are likely to prove beneficial by a rapid enlargement of our numbers.

And in no department of human affairs is progress here more sure than in medical knowledge. Our Atlantic States have inherited a reverence for European opinions, which, although commendable in our early medical history, is at the present day less favorable to American progress and discovery in medicine. We need to interrogate nature and experience more, and European opinions less. We need mental as well as political independence, a freer swing of thought and purpose that characterizes our brethren of the West, and which this Association is adapted to call into action.

Dr. Washington, Chairman of the Committee of Arrangements, welcomed the Association to St. Louis with some pertinent remarks, which were replied to in a happy manner by the President of the Association.

The attendance was large, considering the length of journey performed by most of the delegates, between two and three hundred being present, representing twenty-three States, the Army and the Navy.

Notwithstanding some disadvantages attend the yearly transfer of the Association, yet we consider these more than overbalanced by the good results accruing therefrom in creating a more extended interest throughout the country in the objects of the Association, and at the same time acting as a spur to the profession at large, by making them cognizant of the advance of medical science in various sections of the Union. This claim of duty and benefit of result are happily illustrated by the foregoing quotation from Dr. Parson's address.

As an exemplification of this, we would mention the agreeable surprise afforded us by our Western brethren, who, in so short a period, have done so much for the profession by their various collections, especially in the department of comparative anatomy.

The amount of business transacted was as great as usual. A number of reports and papers were read and discussed before the Association.

As to the social enjoyment, the entertainments, both private and public, were on a scale commensurate with the proverbial liberality and hospitality of the West.

The usual Committee of one from each State was appointed to nominate officers and transact the general business of the Association.

The Committee, after retiring for a short period, reported through their Chairman, Dr. White, the following list of officers for the ensuing year:—

For President, CHAS. A. POPE, M. D., of Missouri. *Vice-Presidents*, N. S. DAVIS, M. D., of Illinois; WM. T. WRAGG, M. D., of South Carolina; JOHN GREEN, M. D., of Massachusetts. *Secretaries*, EDWIN S. LEMOINE, M. D., of Missouri; FRANCIS WEST, M. D., of Pennsylvania. *Treasurer*, D. F. CONDIE, M. D., of Pennsylvania.

Dr. POPE, on being conducted to the chair, made the following brief and eloquent remarks:—

GENTLEMEN! There are occasions when the mouth is dumb, because the heart is full. Such I feel to be my present position, when I behold around me so many members of a noble profession. I am grateful for the honor you have conferred upon me; and, however unworthy in other respects, I will yield to none in a just appreciation of the lofty aims and noble aspirations of the profession of which we are members. In this view, Gentlemen, I feel that the honor was not so much intended for myself, as for the advances made in science by the profession generally in the West. For myself, I return you the thanks of a grateful heart. I will endeavor to act to the best of my abilities; and again I thank you.

A vote was passed, that an account of the Norwalk railroad catastrophe, and a brief memoir of the members of the Association who then lost their lives, should be prepared for publication in the Transactions.

On motion of Dr. GROSS, it was recommended that the Committee of Arrangements for the future should avoid the preparation of costly entertainments.

Dr. PINKNEY, of the Navy, was invited to address the Association in behalf of the Army and Navy, which he did in a spirited and eloquent manner.

SECOND DAY.

After the reading, amendment, and adoption of the minutes of the preceding day, and some other preliminary business,

Dr. ATLEE, of Lancaster, Pennsylvania, moved that the memorial from the members of the American Medical Society, of Paris, to the American Medical Association, be read and referred to the Committee of Medical Education, which motion was carried.

The memorial, after preluding that the Association had its origin in "a consciousness of the low state of medical education in our country," and from the desire to elevate the standard, urges upon the Association the necessity of a change:—

While acknowledging, however, the superiority of education in Europe, we are far from desiring to arrive at equality by imitating their methods. We therefore beg to urge the following plan for the consideration of the Association: That in each State there be appointed by the Medical Society of the State a Board of Examiners, which Board shall be chosen every year from members of the Society, and which shall perform its duties the following year in the place, and immediately before the sitting of the State Medical Society; that their examinations be public, and that every one whomsoever may apply who shall be introduced by a member of the Society; and that no one can hereafter become a member of the State Medical Societies, nor of the American Medical Association, who has not the certificate of having satisfactorily passed such an examination.

So far we coincide with the spirit of this memorial, but are inclined to doubt the wisdom or policy of the following passage of its declaration:—

“No certificates of attendance upon courses of lectures should be necessary, but solely the possession of the necessary amount of medical knowledge to practise his profession with safety and honor.”

We are of opinion that evidence should be required from the offering candidates, of a curriculum of study, embracing the fundamental elements of medical instruction for a given period of time, at some generally recognized and duly authorized school.

The President announced that the reading and consideration of the annual reports of committees would now be in order. The following chairmen of committees submitted abstracts of their reports:

Dr. F. CONDIE, of Philadelphia, on the Causes of Tubercular Disease, was not prepared to report, and requested further time.

Dr. GEO. B. WOOD, of Philadelphia, on Diseases of Parasitic origin, not being present, had sent a verbal request to be discontinued. His request was accordingly granted.

Dr. JOHN A. ATLEE, of Lancaster, Pa., on Epidemics of New Jersey, Pennsylvania, Delaware, and Maryland, not being prepared to make a full report, requested to be continued on the same committee.

Dr. D. J. CAIN, of Charleston, S. C., on Epidemics of South Carolina, Florida, Georgia, and Alabama, read an abstract of his report. It was referred to the Committee on Publication.

Dr. W. L. SUTTON, of Georgetown, Ky., on Epidemics of Tennessee and Kentucky. He had made a partial report, but of such meagre materials that he requested to be continued. His report was referred to the Committee of Publication when ready.

Dr. GEORGE MENDENHALL, of Cincinnati, Ohio, on the Epidemics of Ohio, Indiana, and Michigan. He presented a report for the years 1852 and 1853, of which he read a brief abstract. The report was referred to the Committee on Publication, with the request to have it published in the proceedings of the present year.

Dr. R. S. HOLMES, of St. Louis, Mo., on Epidemic Erysipelas, read an abstract of his report. It was referred to the Committee on Publication.

Dr. E. D. FENNER, of New Orleans, on Epidemics of Louisiana, Mississippi, Texas, and Arkansas. He read a comprehensive abstract of his report—dwelling principally on the ravages of the cholera and yellow fever, and the causes and the means of treatment.

Dr. FENNER had not completed his report, and Dr. MCPHEETERS offered a resolution that Dr. FENNER be requested to complete his report, and submit it to the Committee on Publication, to be published. The resolution was adopted.

Dr. MUSSEY, of Cincinnati, now made a motion to suspend the order of regular business, to allow Dr. LINTON, of St. Louis, to express his views with regard to the pathology of the yellow fever. A suspension of business was made for this purpose.

He expressed his views very clearly and at some length on this subject. He advocated the idea that vegetable decomposition was not necessary to

the production of the autumnal diseases of this country. He considered yellow fever nothing more than an aggravated type of bilious fever, caused by the retention of hydro-carbonaceous substances in the blood. In other words, the agencies producing yellow fever were *Northern blood* subject to the heat of the Southern latitudes.

A motion was made and carried that Dr. LINTON be requested to draw up the substance of his remarks, to be presented to the Committee of Publication.

Dr. DANIEL BRAINARD, of Chicago, Illinois, on the Constitutional and Local Treatment of Carcinoma. He requested further time to make a full report.

Dr. N. S. DAVIS, of Chicago, Illinois, on the Influence of Local Circumstances on the Origin and Prevalence of Typhoid Fever. The report, of which he read a brief abstract, was referred to the Committee on Publication.

Dr. DONALDSON, of Baltimore, on the Present and Prospective Value of the Microscope in Disease. Dr. DONALDSON, in a communication, stated that his report was complete, but he not being present, it was, without reading, referred to the Committee on Publication.

The report of the Committee on Medical Education was received, but owing to its length, its reading was passed over. It was referred to the Committee of Publication.

Dr. POPE, as Chairman of the Committee on Prize Essays and Volunteer Communications, reported that there were nine in number, possessing undoubted merit, but while according these claims to their authors, the committee preferred to be governed in their choice by considerations of originality and practical import, rather than of mere theoretic speculation. The prize was therefore awarded to the essay, entitled "An Essay on a new method of treating un-united fractures and certain deformities of the osseous system," bearing a motto in French, which, being liberally rendered in modern English, reads, "And notwithstanding all the pains I have heretofore taken, I have reason to praise God, in that it hath pleased Him to call me to that branch of medical practice commonly called surgery, which can neither be bought by gold nor by silver, but by industry alone and long experience."

Dr. POPE then broke the seal and announced the name of Professor BRAINARD, of Chicago.

We congratulate our friend on the masterly monograph, of which he gave a very concise and instructive *resumé* to the meeting, at the suggestion of Dr. McPHEETERS; we have no doubt that when the transactions appear, this contribution to surgical knowledge will receive the cordial affirmation of the profession at large to the decision of the committee.

Dr. ELBERT offered certain resolutions to the effect that a committee be appointed to recommend to the next annual meeting, for consideration, any alteration they might deem necessary in the Constitution, By-Laws, &c., and

also that the place of holding future annual meetings of the Association be determined by ballot, without the intervention of the Nominating Committee. The resolutions, after much discussion, were lost.

Dr. GUTHRIE offered the following resolutions, which were unanimously carried :

Resolved, That in the Secretary of the Treasury's recommendation to Congress, to abolish or materially modify the duty on such crude drugs not producible in this country, as are used in the laboratories of the country in the manufacture of chemicals, we recognise a wise provision for the further protection of the profession and the community at large, from impure and sophisticated medicines.

Resolved, That a copy of this resolution be signed by the proper officers of this Association, and transmitted by the same to the Secretary of the Treasury, and to the Committee on Ways and Means.

Dr. J. B. JOHNSON now stated to the meeting that he had a letter from Dr. STEPHEN WILLIAMS, of Illinois, enclosing a preamble and resolutions, which he desired to read to the meeting. He then read the letter, which contained arguments on and resolutions to the purpose of constructing and publishing memorials of deceased eminent medical men. The letter thus speaks of recent losses :

"Within a very short space of time, we have been called to lament the death of Dr. Nathan Chapman, the former President of this Association, of Dr. Samuel G. Morton, Wm. E. Homes, Isaac Parish, G. S. Pattison, J. Kearney Rodgers, Daniel Drake, the great medical pioneer of the West, Samuel McClellan, Amos Twitchell, Abiel Pierson, G. C. Shattuck, Archibald Welch, and very many others whom time will not permit me to enumerate."

The preamble and resolutions referred to in the foregoing, were then on motion adopted. The chair then announced that he would appoint the committee contemplated by the resolutions hereafter.

Dr. FRENCH submitted the following resolution, which was carried :

Resolved, That a committee be appointed to inquire what State or other Societies, represented in this Association, are in fellowship with irregular practitioners.

Dr. BLATCHFORD, of Troy, read a letter from Dr. A. D. SPORE, stating that he (Dr. SPORE) had been for some time investigating the subject of Hydrophobia, to ascertain what influence the weather had upon the disease ; and in the letter he requested that communications on the subject might be sent to him by members of the faculty who had opportunities of making observations. Dr. SPORE not being a delegate, it was moved that Dr. BLATCHFORD be appointed chairman of a committee for the investigation of this subject.

The following resolution was offered by Dr. DOWELL :

Resolved, That a committee be appointed to investigate the improvements of the instruments for Lithotomy by NATHAN R. SMITH, PAUL F. EVE, and Dr. McDOWELL.

The resolution was laid on the table.

The following was offered by Dr. S. M. SMITH, of Columbus, Ohio, which was carried :

Resolved, That a standing committee of — be appointed by the Association, on the subject of Insanity as it prevails in this country, including its *causation*, as here-

ditary transmission, educational influences, physical and moral, social and political institutions, &c. Its *forms and complications, curability*, and means of cure and prevention.

Dr. SAMUEL P. WHITE, of the University of Buffalo, submitted the following resolution, which was carried :

Resolved, That the thanks of this Association be presented to Dr. J. KNIGHT, late President, for the very dignified, courteous, and efficient manner in which he presided over its deliberations; and that he be respectfully requested to furnish the usual address for publication.

The committee appointed by the American Medical Association to devise or consider some comprehensive plan for the more general, systematic, and thorough investigation of subjects connected with medical science, made a report, to which was appended the following resolution :

Resolved, That the American Medical Association hereby recommends all medical societies to establish, in accordance with the plan detailed in the foregoing report, special committees for the selection, investigation, collaboration, and publication of all subjects of interest connected with medical science.

The resolution was carried, and the report and resolution were referred to the Committee on Publication.

Mr. DAVIS presented some specimens of milk to the Association, which he explained would, if used, prevent many of the diseases to which children are subject, arising from using putrid milk. He respectfully submitted the specimens to the consideration of the Association.

After a session of half an hour, the meeting adjourned till 9 o'clock, Thursday morning.

THIRD DAY.

The Association convened at 9 o'clock, A. M. Dr. POPE, President, in the chair.

Dr. ATLEE offered the following resolution, which was carried :

Resolved, That it shall be the duty of the Publication Committee to append to each volume of the transactions, hereafter published, a copy of the Constitution of the Association.

The following resolution, offered by Dr. GROSS, was also carried ; and Dr. GROSS was appointed by the chair the committee designated :

Resolved, That a committee of one be appointed by the chair to inquire into the causes which obstruct the formation and establishment of our National Medical Literature, and to report the subject at the next annual meeting of this Association, or as soon thereafter as practicable.

An invitation from the Directors of the Pacific Railroad, to use their road for an excursion, was accepted, with a vote of thanks.

Dr. J. BERRIEN LINDSLEY offered the following resolution, which, on motion, was referred to the Committee on Medical Education, with instructions to report at the next annual meeting of the Association :

Resolved, That this Association earnestly recommend to the few Western schools which still retain the rule of making four years' practice equivalent to one term at college, the abrogation of said rule, as holding out a strong inducement and temptation to young men to enter upon the practice of medicine with little or no preparation.

Dr. PAUL F. EVE, of Nashville, Tenn., submitted a resolution, which, after amendment, as follows, was carried :

Resolved, That a committee of three be appointed by the chair, to report at the next meeting of the Association the best means for preventing the introduction of disease by emigrants into our country.

The chair appointed Drs. Dickson, Griscom, and E. D. Fenner, a committee.

Dr. LINTON, of St. Louis, offered the following, which was also referred to the above-named committee :

Resolved, That in the opinion of this Association, quarantine establishments afford no protection to States and cities against the invasion of epidemics, such as cholera and yellow fever.

Dr. PENN offered a resolution to the following effect :

Resolved, That the members of the Committee of Arrangements, who are not members of the Medical Association, be invited to take seats in this Association, as members by invitation.

Which was carried.

Dr. JAYNE arose and offered a resolution in relation to the memorial from Drs. Hammer and Murphy, of the American Medical Society at Paris, to the American Medical Association, which was, at a previous meeting, referred to the Committee on Education :

Resolved, That the memorial from Drs. Hammer and Murphy be withdrawn from the Committee on Education.

Upon this resolution a spirited debate ensued, in which Dr. Jayne assailed the action and motives of the memorialists, who were in turn sustained by Drs. Atlee, Elbert, McIlvain, and Edgar; the discussion terminated in the withdrawal of the memorial from the Committee on Education, a decision, it appears to us, very much to be regretted, although we have no doubt the mere discussion of the subject will be attended with good results.

Report of the Committee of Nominations.

The Committee on Nominations, in fulfilling the duty imposed upon them, recommend the continuance of several of the special committees previously created, and the appointment of some new ones. They therefore submit the following list of Chairmen of special committees, with the subjects to them committed :

Dr. Worthington Hooker, of New Haven, Ct., "On Epidemics of New England and New York."

Dr. John L. Atlee, of Lancaster, Pa., "On Epidemics of New Jersey, Pennsylvania, Delaware, and Maryland."

Dr. D. J. Cain, of Charleston, S. C., "On Epidemics of South Carolina, Florida, Georgia, and Alabama."

Dr. W. L. Sutton, of Georgetown, Ky., "On Epidemics of Tennessee and Kentucky."

Dr. Thos. Reyburn, of St. Louis, Mo., "On Epidemics of Missouri, Illinois, Iowa, and Wisconsin."

Dr. Geo. Mendenhall, of Cincinnati, Ohio, "On Epidemics of Ohio, Indiana, and Michigan."

Dr. E. D. Fenner, of New Orleans, La., "On Epidemics of Mississippi, Louisiana, Arkansas, and Texas."

Dr. James Jones, of New Orleans, La., "On The Mutual Relations of Yellow and Bilious Remittent Fever."

Dr. D. F. Condie, of Philadelphia, Pa., "On the Causes of Tuberculous Disease."

Dr. Jos. Leidy, of Philadelphia, Pa., "On Diseases of Parasitic Origin."

Dr. A. P. Merrill, of Memphis, Tenn., "On the Physiological Peculiarities and Diseases of Negroes."

Dr. Jos. N. McDowell, of St. Louis, Mo., "On Statistics of the Operation for the Removal of Stone in the Bladder."

Dr. F. P. Porcher, of Charleston, S. C., "On the Toxicological and Medicinal Properties of our Cryptogamic Plants."

Dr. Daniel Brainard, of Chicago, Ill., "On the Constitutional and Local Treatment of Carcinoma."

Dr. George Engleman, of St. Louis, Mo., "On the Influence of Geological Formations on the Character of Disease."

Dr. Henry Taylor, of Mount Clemens, Mich., "On Dysentery."

Dr. Horace Green, of New York, "On the Use and Effect of Applications of Nitrate of Silver to the Throat in Local or General Disease."

Dr. P. C. Gooch, of Richmond, Va., "On the Administration of Anæsthetic Agents during Parturition."

Dr. Chas. Hooker, of New Haven, Ct., "On the Diet of the Sick."

Dr. E. R. Dabney, of Clarksville, Tenn., "On Certain Forms of Eruptive Fevers, prevalent in Middle Tennessee."

Dr. Sanford B. Hunt, of New York, "On the Hygrometrical State of the Atmosphere in various Localities, and its Influence on Health."

Dr. Frank H. Hamilton, of Buffalo, N. Y., "On the Frequency of Deformities in Fractures."

Dr. M. M. Pallen, of St. Louis, Mo., "On Diseases of the Prostate Gland."

Dr. H. A. Johnson, of Chicago, Ill., "On the Excretions as an Index to the Organic Changes going on in the System."

Dr. Leroy H. Anderson, of Sumterville, Ala., "On Typhoid Fever and its Complications as it prevails in Alabama."

Dr. W. H. Byford, of Evansville, Ia., "On the Pathology and Treatment of Scrofula."

Dr. N. S. Davis, of Chicago, Ill., "On the Nutritive Qualities of Milk, and the influence produced thereon by pregnancy and menstruation in the human female, and by pregnancy in the cow, and also on the question whether there is not some mode by which the nutritive constituents of milk can be preserved in their purity and sweetness, and furnished to the inhabitants of cities in such quantities as to supersede the present defective and often unwholesome method of supply."

Dr. E. B. Haskens, of Clarksville, Tenn., "On the Microscopical Investigations of Malignant Tumors."

Dr. George K. Grant, of Memphis, Tenn., "On the Sulphate of Quinia as a Remedial Agent in the Treatment of Fevers."

Dr. R. R. McIlvain, Cincinnati, Ohio, "On the Study of Pathology at the Bedside."

Dr. E. S. Cooper, of Peoria, Ill., "On Orthopædic Surgery."

Dr. Andrew F. Jeter, of Palmyra, Mo., "On the Modus Operandi of the Envenomed Secretions of Healthy Animals."

Dr. Sam. M. Smith, of Columbus, Ohio, "On Insanity."

Dr. Rene la Roche, of Philadelphia, Pa., "On the Jaundice of Yellow Fever in its Diagnostical and Prognostical Relations."

Dr. Charles Chandler, of Rochepport, Mo., "On Malignant Periodic Fevers."

Dr. S. B. Chase, of Portland, Me., "On Typhoid Fever in Maine."

Committee on Plans of Organization for State and County Societies—

A. B. Palmer, M. D., Michigan; R. R. McIlvain, M. D., Ohio; D. L. McGugin, M. D., Iowa; E. R. Peaslee, M. D., New Hampshire; Thomas Lipscomb, M. D., Tennessee.

*Committee on Medical Literature—*Robert J. Breckenridge, M. D., Kentucky, Chairman; A. A. Gould, M. D., Massachusetts; D. L. McGugin, M. D., Iowa; J. B. Flint, M. D., Kentucky; O. M. Langdon, M. D., Ohio.

*Committee on Medical Education—*Wm. H. Anderson, M. D., Alabama; A. Lopez, M. D., do.; Andrew Murray, M. D., Michigan; A. Ramsay, M. D., Tennessee; R. D. Ross, M. D.

*Committee on Prize Essays—*Rene La Roche, M. D., Pennsylvania; Isaac Hays, M. D., do.; Alfred Stillé, M. D., do.; J. B. Biddle, M. D., do.; Geo. W. Norris, M. D., do.; Joseph Carson, M. D., do.; Joseph Leidy, M. D., do.

*Committee of Arrangements—*Isaac Hays, M. D., Pennsylvania; G. Emerson, M. D., do.; Wilson Jewell, M. D., do.; Alfred Stillé, M. D., do.; Francis West, M. D., do.; Wm. V. Keating, M. D., do.

*Committee on Publication—*Pliny Earle, M. D., New York; D. Francis Condie, M. D., Pennsylvania; E. S. Lemoine, M. D., Missouri; A. March, M. D., New York; E. H. Davis, M. D., do.; C. R. Gilman, M. D., do.

After the reading of the report, Dr. REYBURN moved its adoption, excepting that portion referring to the Committee on Publication, in the following resolution:

Resolved, That the said report be adopted, with the exception of that portion which refers to the Committee on Publication.

This question seems to have been one of the highest magnitude and importance, if we can judge from the discussion which ensued, and the warm and strenuous effort made to retain the publication at Philadelphia. It does seem that a vast deal of "animal heat," "vital energy," "nervous excitement," and what may not unaptly be termed "reflex action," was expended and lost in the debate, which at length terminated in favor of the original proposition by the report. Did it not once occur to the oppositionists that if it would be advantageous to the interests of Medical Science generally, and to the Profession *locally*, that the meetings of the Association should be transferable; so also would it be useful, encouraging, and beneficial, that the *place* and superintending committee of the publication of its transactions should be occasionally varied, in accordance with the

facilities possessed by other cities for the purpose? Let there be no monopoly of any kind connected with so liberal an institution.

After the vote was announced, the delegation from Philadelphia, through Dr. LA ROCHE, announced that they would take the responsibility of tendering the resignation of Dr. CONDIE, of Philadelphia, Treasurer of the Association. After some little discussion, the resignation of Dr. CONDIE was accepted.

Dr. WEST, of Philadelphia, one of the Secretaries, then tendered his resignation, and the question being put upon accepting it, it was lost.

Dr. BRECKENRIDGE, of Kentucky, then offered the following resolution, which was carried :

Resolved, That hereafter the majority of the Committee on Publication shall be selected from the physicians of that city in which the Association may annually meet.

A vote of thanks was then unanimously returned to Dr. CONDIE for the able, zealous, and impartial manner with which he had discharged his duties as Treasurer.

Dr. ATLEE offered the following resolution, which was carried :

Resolved, That this Association earnestly recommend to their medical brethren in those States in which societies do not exist, the immediate organization of State and County Medical Societies.

Dr. RAMSEY offered a resolution, which, on motion of Dr. COONS, was laid on the table.

Dr. BRECKENRIDGE offered a resolution to the following effect :

Resolved, That the papers and documents of the Association shall hereafter be the exclusive property of the Association, which, as amended by Dr. Smith, was carried.

Dr. PHELPS took the stand, and read the following abstract :

"The document I hold in my hand purports to be an abstract of a paper which traces the connection existing between medicine and religion in its origin and progress, and might receive the following style, to wit :

"Religion an Element in Medicine, or the duties and obligations of the profession."

This is a document of great value and importance, which we regret our space will not permit us, in this number, to give at length ; it was referred to a special committee, composed of Drs. Atlee, Sayre, and March.

A resolution was reported to amend the constitution, which provides that its annual meetings shall be held on the first Monday in May, and substitute the second Monday. The resolution, under the rule, lies over for a year.

Dr. W. H. BYFORD offered a resolution of thanks to Dr. PINCKNEY, of the United States Navy, for the able address delivered before the Association on the first day of its session, which was unanimously adopted.

Dr. ATLEE offered a resolution tendering the thanks of the Association, and of the individual members, to the citizens of St. Louis for their hospitality and kindness ; also, to the Directors of the various railroads and officers of steamboats, for the generous manner in which they have tendered their kind offices, which was adopted.

Dr. WHITE moved that a vote of thanks be extended to the late Publishing Committee for their best endeavors to serve the Association, which was unanimously adopted.

A resolution offered by Dr. W. W. HITT, about alcoholic drinks, was adopted and referred to the Committee on Nomination.

A resolution offered by Dr. C. B. HUGHES, relating to speciality practice in Surgery, was on motion laid on the table.

Dr. WHITE, from Nominating Committee, reported to the Association the name of Dr. BLATCHFORD, of New York, as Treasurer, in place of Dr. CONDIE, resigned.

Dr. BLATCHFORD declined acting in that capacity, and the committee subsequently reported the name of Dr. WOOD, of New York. They also reported a special committee on Epidemics, for the States of Virginia and North Carolina, with Dr. HASKINS as chairman; and also, the resolution relative to alcoholic drinks was reported back by them, referring it to a special committee, consisting of Dr. MUSSEY.

Dr. W. S. EDGAR offered a resolution in regard to the compounding of medicine, and recommending apothecaries to use different colored paper in putting up poisonous drugs, with an appropriate stamp upon it, in contradistinction to other medicines.

Dr. BANE, of Illinois, was elected a permanent member.

A letter from Dr. ENGELMAN, of St. Louis, was read, resigning his situation as chairman on one of the special committees; but the Association refused to accept it.

The following resolution, offered by Dr. J. B. LINDSLEY, was, on motion, laid on the table:

Resolved, That the too prevalent practice of Professors in Medical Colleges recommending their own writings and editings as text-books for their students, is, in the opinion of this Association, a serious evil, trammelling as it does, the student in his choice of books, and promoting the publication and circulation of works of inferior merit.

A vote of thanks was returned to Dr. HOOKER, Treasurer *pro tem*.

Dr. GROSS informed the Association that the second volume of the work of the late Professor Drake, of Cincinnati, was now in the press at Philadelphia, and would be issued early in the present summer. The second volume, he said, was on Practical Medicine, and will be entirely independent of the first.

It seems unfair, almost, to pass over with slender comment, the proceedings of the last day, which were almost exclusively confined to the participation of the abundant hospitality of the city, at the dinner which was given to the Association and invited guests, but our space is exhausted. Suffice it to say, that evidence was not wanting of the manner in which the warm and social feelings, so much in harmony with the occasion, animated every one. Toasts and sentiments eulogistic and inspiring, speeches eloquent and characteristic, were abundant; nor was the aid of Apollo wanting to his votaries and disciples—poetry as well as physic—lent its charm to enliven the hour; and none, we opine, who were present on the occasion, will soon, if ever, forget the evening spent by them in the “far West.” †

NEW YORK OPHTHALMIC HOSPITAL.—We have been intending, for some time, to notice the report of this institution, but have been prevented. Though a very modest, it is a most useful charity; and we hazard nothing in saying that there is abundant occasion not only for this, but others of a similar design. The directors, governors, and friends of the institution have done well, but especial praise is due to the surgeons, for their industry and success. In this connection, we take pleasure in noticing the fact that Dr. Mark Stephenson's class, of the last winter, expressed to him their appreciation of the value of his lectures, in the tangible form of a present of a case of Luer's instruments for operations on the eye, valued at one hundred dollars. We know they are excellent instruments, and we know that Dr. S. will make excellent use of them.

PROFESSOR ROUX.—The surgical career of this eminent Frenchman, lately deceased, was one of the longest and most glorious recorded in the annals of science. For a period of sixty years, he shone in the first rank as professor, scholar, lecturer, hospital surgeon, private practitioner, or academician. Born at Auxerre, in 1780, he was sufficiently advanced in surgery, in 1795, to receive the appointment of assistant surgeon in the army. In 1797, he visited Paris, where he soon made the acquaintance of Bichat, and became his friend and co-laborer. In 1801, he carried off a first prize in the *Ecoles de Santé*, and in 1802, he competed with Dupuytren for a post in one of the large hospitals. Henceforth, it was his lot to meet with Dupuytren at every turn in his career. In 1806, at the age of twenty-six, we find him surgeon of the hospital of Beaujou; and in 1810, in the same capacity, in the hospital of *La Charité*, in Paris, where he was associated with the great Boyer, whose daughter he subsequently married, and who had already recognised in his youthful assistant the most skilful operator of his time. In 1812, he was again Dupuytren's competitor, and although then defeated, acquitted himself so brilliantly that, when a few years later a second chair became vacant, it was bestowed upon him by the unanimous vote of the faculty. The earnestness and learning exhibited by M. Roux in these public contests have never been surpassed.

Although thus variously employed in the pursuit of station, and in hospital and private practice, M. Roux still found time to contribute to numerous publications. At the age of twenty, he assisted in editing *l'Anatomie Descriptive*, which reformed French anatomy. The fifth volume of that work is entirely from his pen. At a later period, he conceived the plan of another treatise of the same kind, of which only the first volume was printed;

and even that was never published. His duties as an operator, and the exigencies of the course of instruction, bequeathed to him by Bichat, did not permit him to continue it. In 1809, he published a volume of miscellanies, in which, without ceasing to be an anatomist, it is noticeable that his attention is more especially directed to surgery. In that volume will be found contributions to the progress of the art, which time has not cast into oblivion.

His *Médecine Opératoire* was never concluded. It was commenced in 1813, when Dupuytren was carrying everything before him at the *Hôtel-Dieu*. To hold his own, constant effort was necessary. With such a competitor and in such a struggle, which lasted for twenty-five years, literary labor was impossible: but, although he left his didactic works unfinished, M. Roux never ceased to work for the advancement of surgery. Either by real creations, or by important modifications, he has left his mark upon a host of questions. He was conspicuous in his lectures for insisting upon the importance of surgical anatomy. The suture of the velum of the palate, an operation which has delivered humanity from an afflicting deformity, is entirely due to him. A still more painful infirmity, the disruption of the perineum, has disappeared from the class of incurable diseases, thanks to his inventive genius. It is he, also, who originated those ingenious operations which have for their object to remedy deformities of the face, and of the surface of the body in general. The resection of diseased articulations owes to him its most brilliant examples of success.

In 1814, he paid a visit to London; and on his return published a work which, at the time, made a great noise, and which, among other results effected a total change in the French treatment of ulcers of the legs.

But it was more especially in the handling of the bistoury that M. Roux had no equal. He used the instrument with unequalled skill, elegance, and ease; his proceedings were methodical, prompt, and delicate; nothing could be neater or more elegant than the operation he had just terminated, or the dressing he had just made; and this marvellous dexterity was preserved by him up to the last moment. At an age when the fingers of other men are stiffened and trembling, he still practised the operation for cataract with the same steadiness as in the early years of his long career.

M. Roux belonged to the school of surgery, of which Sabatier, Desault, and Boyer, were the highest personification. Precise and mathematical in their descriptions, these masters, of course, placed in the first rank the qualities of the hand, or the manual of operative medicine; reserving for the second rank all that pertained to intellectual appreciation, to the nature of disease or its medication. Thus, chiefly, surgery had for them a meaning which was strictly limited by the grammatical acceptation of the word.

Nurtured in these principles, which were beside conformable to his natural tendencies, M. Roux remained all his life, preëminently, an operator; in this respect withholding his adhesion to the new school, which contends for the subordination of manual skill to medical science. In fact, strictly defined surgery, of which he was, as it were, the efflorescence, and, unquestionably the most brilliant expression, loses in him the most solid pillar it had still standing in Europe.

Among M. Roux's moral characteristics, his scientific integrity stood out in strong relief, to this must be added, goodness of heart, an obliging disposition, frankness, expansiveness, and geniality in the intercourse of life. Unlike most other men, he spoke readily of his mistakes and reverses; irreproachable in his intentions, it never entered his mind, that such admissions might be turned against him, and used as weapons in the hands of envious rivals. His graceful deportment in professional intercourse made him everywhere acceptable; he was incapable of wounding any man's feelings, and paid the same regard to the most humble practitioner, as to his equal in rank.

Devoted to his pupils, he was always ready to serve and guide them, especially such as showed any talent for surgery; in such cases, he took delight in making them operate under his own eyes, thus witnessing what he was wont to call their first feats of arms. The number that remained attached to him is countless. Rejoicing in their success, as in his own, he also gave them a large place in his intimate affections; and, as his good deeds were wholly disinterested, he was deeply pained, when, as was sometimes the case, he was repaid by ingratitude.

In his visits to Italy, Germany, and England, M. Roux became personally known to all the notabilities of those countries. The wish to see him operate, and the charm of his manner, also drew to him all the foreign surgeons who visited Paris in pursuit of knowledge. Among these were many Americans, who live to bear testimony to his superior qualities. In fact, he was for twenty years, in the estimation of the whole world, the brightest surgical illustration of the age.

If it were the nature of man to find happiness out of himself, M. Roux had nothing to regret. A spotless reputation, a numerous family, wealth, honors—all these he possessed; and he was on the point of being elected President of the Academy of Sciences—a dignity he was ambitious of attaining—when Providence intervened and cut short the thread of his days.

J. M. C.

DR. SIMS' LECTURE.—On the evening of the 18th ult., a number of professional men and others, about two hundred, among whom were conspicuous five ladies, attended at the Stuyvesant Institute, by invitation, to

hear Dr. Sims' argument in favor of an hospital for the reception and treatment of the diseases peculiar to females.

The lecturer traced the history of his operation for vesico-vaginal fistula, and related, in a pleasing and effective manner, the various steps by which he had attained progressively to the present excellence in the performance of this great achievement in curative surgery. It was a striking narrative. The obstacles and difficulties he encountered, of all kinds and from every quarter, the failures and disappointments which mortified but did not subdue him, the discouragement of friends, and the sacrifices of time, money, bodily and mental labor, would seem to have been sufficient to defeat a less resolute will, to try a faith not sustained by the soundness of the principles which directed him, and the sufficiency of that science on whose altar he was laboring to place this trophy of perseverance, ingenuity, and devotion.

At the conclusion of the lecture, Dr. Delafield was appointed Chairman of the meeting, and Dr. Beadle, Secretary, when two resolutions were unanimously passed, one expressive of accordance with the views propounded by the lecturer, the other appointing a committee of ten, composed of five medical and five lay members, to devise a plan for accomplishing so desirable an object as the establishment of the institution then eloquently advocated.

In the course of his lecture Dr. Sims made some pointed observations on the subject of specialities in practice, which deserve a more extended notice than we can at present afford, and which we shall possibly attempt on some future occasion.

†

FROM THE CHEROKEE NATION.—An interesting letter from Cherokee Nation, gives us an account of a case, in which the presence of ascarides in the intestines, seemed in a marked manner to retard convalescence, after pneumonia, in a girl of ten years of age. The anthelmintic used was a preparation, of which chenopodium is the active principle. The worms were discharged in large numbers, matted together; it is computed that four hundred were voided in the course of a few days. "After this stampede of the parasites," as our correspondent humorously terms it, the child "rapidly brightened up, and recovered completely." He mentions another case; one of sudden death from the effects of violent rage in a female of uncontrollable passions. There was no postmortem examination, but the writer presumes, from the discharge of blood from the mouth and nostrils, there was rupture of some pulmonary vessel. Death occurred in fifteen minutes from the climax of the mental excitement, and was preceded by a sense of suffocation. We are much obliged to our correspondent, and shall be happy to hear from him again. Let others also follow his example; from such facts, graphically stated, much information is frequently obtained.

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